

JUL 17, 2015

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ANT-MAN

SHRINKING
SUPERHERO

THERE'S A NEW BIG - OOPS,
WE MEAN TINY - MARVEL MOVIE

PLUTO

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HORIZONS

SPACECRAFT MAKES FLYBY
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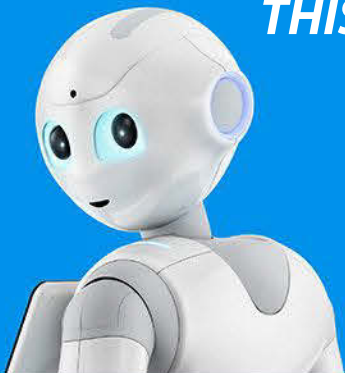
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FIRST ELECTRIC PLANES FLY OVER ENGLISH CHANNEL



Airbus flew its electric plane across the English Channel for the first time Friday - hours after an independent French pilot made a similar voyage, beating the aeronautics giant in this symbolically important step toward making electronic flight viable in the long term.

Several companies in different countries are developing electric planes, in hopes of offering a fuel-free flight alternative for the future - and the battle to perform world “firsts” in electric planes is heating up as the technology becomes more durable.

Amid fanfare, European planemaker Airbus flew its E-fan plane from Lydd, England, to the French port of Calais on Friday morning. The plane operates exclusively on batteries, and since there’s no oil or water, the 20-foot long, 1300-pound jet releases zero emissions.

About 12 hours before Airbus’ Channel flight, French pilot Hugues Duval took his two-engine, one-seat Cricri plane from Calais to Dover and back.

Because he lacked authorization to take off from Calais, another fuel-driven plane towed his 100-kilogram (220-pound) Cricri for the start of the trip, he told The Associated Press. Then he flew autonomously back to Calais and landed safely.

He said he reached a speed of 150 kilometers (90 miles) an hour on his 52-kilometer (31-mile) journey.

Duval told The AP that his successful flight was a “relief” and an “important moment” after years of fine-tuning the plane and flying it over land.

Airbus officials gathered in Calais to celebrate the landing of the E-fan would not comment on Duval’s trip.

The E-fan took its maiden voyage in March 2014, and has taken off 100 times since its latest flight at the Paris Air Show last month. Airbus aims to put the two-seater on the market in 2017, targeting sales at training facilities for entry-level pilots.

“It’s a great victory, but it’s also a start. For us it’s an adventure that permits us ” to imagine commercial flight on electric or hybrid planes, said pilot Didier Esteyne, who flew the Airbus plane Friday. “It’s really the beginning of great innovations.”

The choice of flight path was not coincidental: In 1909, French pilot Louis Bleriot was the first person to fly a plane across the English Channel.

Safety was of secondary priority for Bleriot - he was concentrated on winning 1,000 pounds in prize money from the British Daily Mail newspaper by performing the feat first.

For Airbus’ flight Friday, security professionals were out in full force, with helicopters and rescue speed boats trailing the E-fan.

Electric flight is a nascent sector of the aviation industry, so safety regulations are still in development. Airbus and the French civil aviation authorities worked together to create a test flight program for the jets.

While the E-fan only seats two for now, the aircraft manufacturer is aiming bigger down the line. Chief













Technical Officer Jean Botti told The Associated Press at the Paris Air Show last month, “Our objective here is to make a hybrid-electric hundred seater for the future,” calling it an ambition Airbus could realize in the next 15 years.

Slovenian company Pipistrel was also hoping to send its electric plane across the Channel this week. But engine-maker Siemens blocked the trip at the last minute, saying the motor didn’t have authorization to fly over water, Pipistrel general manager Ivo Boscarol told The AP.

Boscarol said he felt his plane was ready for the journey and estimated that about 10 other electric planes currently in development are also capable of making the flight. He said he hopes to continue working with Siemens in the future to develop the plane.

He compared this week’s flights to those of Bleriot 106 years ago, saying “the Channel, in aviation, has a special place. It’s kind of religious.”





REDDIT INTERIM CEO PAO RESIGNS; HUFFMAN REGAINS CEO TITLE

Reddit said Friday that interim CEO Ellen Pao resigned from the company, and co-founder Steve Huffman is back as its CEO.

The freewheeling online discussion forum and news site, which says it had 164 million unique visitors last month, has been rocked by unrest recently. The firing of a popular staffer earlier this month upset some users, leading to volunteers shutting down parts of the site, and there have been protests over new policies intended to fight harassment.

A statement posted on Reddit by Reddit board member Sam Altman Friday said that Pao, who became interim CEO in November, resigned from Reddit by mutual agreement and will continue to advise the board for the rest of 2015.

Altman acknowledged that Reddit moderators should have better tools and communication from the company, but took some users to task for the nature of their comments about Pao.





He said Reddit accepts disagreements, but said the site must exercise compassion if it wants to be a great community and said some of the things Reddit users wrote about Pao were sickening.

Disagreements are fine. Death threats are not, are not covered under free speech, and will continue to get offending users banned, Altman wrote.

In an email, Pao said she resigned because Reddit's board was asking for faster user growth than she could deliver while holding on to the site's core values. She defended Reddit's policy changes, saying that despite criticism, the new rules are making the community stronger.

We've taken bold and often controversial stances, but always with the greater good of the community in mind, she said. We tackled the thorny issues of harassment on the site, banning harassing behavior without censoring ideas. Though we came under fire on many fronts, we did not waver, working 24/7 to try to keep the site harassment-free.

In a statement posted to Reddit, Pao thanks users who were supportive, saying the positives from the site far outweighed the negatives, and she urged Redditors to remember the human behind the keyboard.

This month Reddit fired Victoria Taylor, who helped run the site's popular Ask Me Anything feature, where Reddit users submit questions to celebrities and other notable people. President Barack Obama, for example, has answered questions on that forum. Some volunteer moderators protested her ouster by shutting down sections of the site, including Ask Me Anything.

Reddit also announced anti-harassment guidelines this year and in June it banned a few groups for violating those rules. Reddit is known for an almost-anything goes style, but leadership said in May that it was unhappy with





harassment on its site and survey data showed its users were also upset about the behavior. The company apologized and said it would do a better job of communicating with moderators and users.

Early this year Reddit said it would remove photos, videos or links that featured explicit content if the person in the image didn't give permission for it to be posted. That came months after hackers obtained nude photos of Jennifer Lawrence and other celebrities and posted them to Reddit, among other social media sites.

Huffman co-founded Reddit in 2005 with Alexis Ohanian. Conde Nast acquired Reddit the following year, and both Huffman and Ohanian left the company in October 2009. Ohanian returned as San Francisco-based Reddit's executive chairman in November.

Before becoming Reddit's CEO, Pao had worked for a storied Silicon Valley venture capital firm, Kleiner Perkins Caufield & Byers. She lost a high-profile gender discrimination lawsuit against Kleiner Perkins in March that brought up issues of the gender imbalance and difficulties faced by women working in Silicon Valley.



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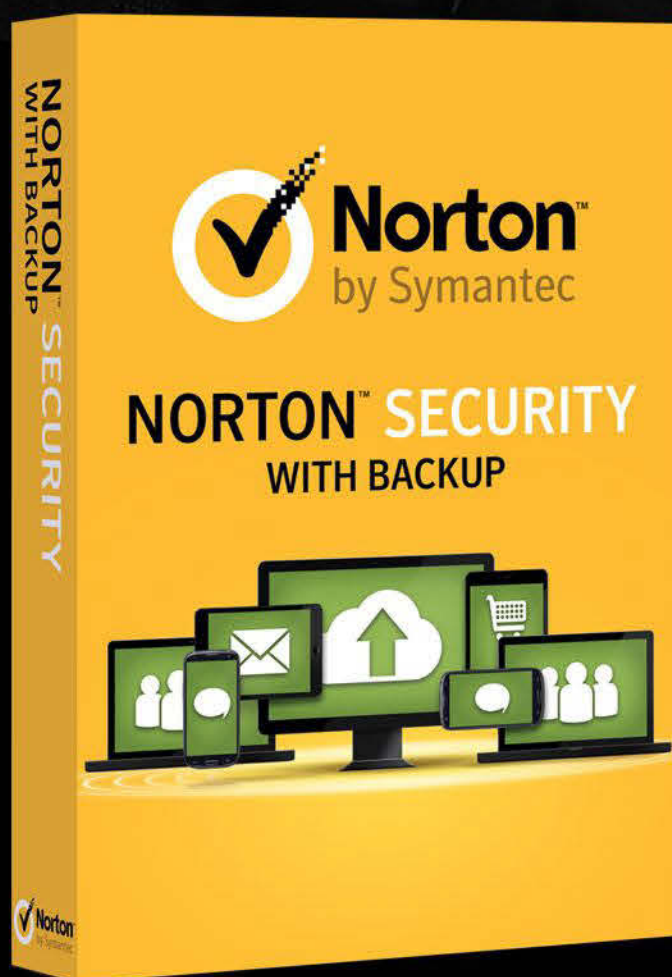
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The background of the poster is a close-up, artistic rendering of the faces of Scott Lang (Paul Rudd) and Hank Pym (Michael Douglas) in profile, facing right. The image has a blue and white color scheme with a painterly texture. In the bottom left corner, a small portion of Ant-Man's red and black suit is visible. The overall mood is serious and dramatic.

THERE'S A NEW BIG - OOPS, WE
MEAN TINY - MOVIE SUPERHERO:

ANT-MAN

THE START OF A WHOLE NEW FILM FRANCHISE?





Look, in the sky! Is it a bird? Is it a plane? Actually, it probably is just a plane. That's because the next Marvel superhero to have arrived in US theaters isn't nearly that easy to spot. Like a splinter, he can be very difficult to locate, but cause no shortage of pain. We are, of course, referring to Ant-Man, whose everyman alter-ego, Scott Lang, is portrayed by Paul Rudd in a movie the prolonged production of which is almost as interesting to learn about as the story that has made the acclaimed movie's final script.

YET ANOTHER SUPERHERO IS BORN, THANKS YET AGAIN TO STAN LEE

You have probably already gathered that, even by comic book standards, Ant-Man is a far from conventional hero. Yet another creation of the legendary comic books writer Stan Lee, Ant-Man made his first appearance in issue 35 of the comic book series Tales to Astonish in 1962, and has been the superhero persona of four different supposedly ordinary men in the decades since, from scientist Hank Pym to Chris McCarthy, who first appeared in the first issue of Irredeemable Ant-Man nearly nine years ago.

In the character's own fictional history, Ant-Man joined the growing pantheon of superheroes after Pym came across a chemical substance which he called Pym Particles and could enable him to drastically change his size. Pym therefore decided to don a helmet capable of controlling ants and shrink to ant size to become the one and only Ant-Man!

THE WRIGHT WAY TO DEVELOP AN ANT-MAN MOVIE

It doesn't read like a concept asking to be taken as seriously as the likes of Marvel stablemates Spider-Man, Iron Man and Thor, however ridiculous the world of superheroes has obviously always been. It is likely the unorthodox nature of the Ant-Man character that initially led Marvel Studios to recruit British director Edgar Wright, best known for his comedic Three Flavours Cornetto trilogy, to take the helm for the first major theatrical venture for Ant-Man.

That was back in April 2006 - and, at that year's San Diego Comic Con, Wright insisted that, despite his own film heritage, **his Ant-Man film would be not a spoof, but instead an action-adventure peppered with comic moments.** He described the core concept of the movie as "how kick-ass it would be to be small". The time certainly seemed appropriate for an Ant-Man movie; Marvel Studios was then readying movie revivals for several of its best-known properties, including Iron Man, Captain America and Thor.

Ant-Man has taken noticeably longer to reach the big screen than those characters; indeed, **it was apparently on Wright's request that the character did not appear in the Avengers movies,** even though he was part of the original team of Avengers in the comic books universe. Another inconvenience during production was Wright's decision to leave the project in early 2014, **Marvel and Wright jointly attributing this to "differences in their vision of the film".** Yes Man director Peyton



MARVEL

ANT-MAN

NO SHIELD. NO ARMOR. NO PROBLEM.







Reed then took the director's chair - but, according to producer Kevin Feige, the film called Ant-Man remained "**still very much in the spirit of what Edgar's original pitch was**".

ANT-MAN LOOKS GREAT... WHEN, OF COURSE, HE ISN'T TOO SMALL TO SEE

Still, the proof of the pudding is in the eating, and it seems that Marvel's careful handling of the project post-Wright has paid off. As Rudd's most notable ability as Ant-Man is that to shrink, it was always vital to visually portray the small character convincingly, without sloppy effects distracting from the viewing experience. Macro photography has eased this - and Rudd has explained that "we're using these Frazier lenses and these small, skater-cam things where you're able to get into these places. Then, we're doing this digital tiling of real surfaces." He added that the process involved "**an insane amount of calculation**".

All of this was completed in post-production, long after Wright's departure. The movie has even benefited from **visual effects provided by Industrial Light & Magic**, the same company that gave the original Star Wars film its extra visual sparkle. And, several months before the movie's release, Marvel gave fans a few ideas of what to expect from the film's visual character by releasing some **new stills of various scenes and concept art of the villain, Yellowjacket**, played by Corey Stoll.

That wasn't the only intriguing concept art that Marvel had released in the





wake of Wright's exit. About a year ago, **Entertainment Weekly displayed a new official poster for Ant-Man**, depicting the hero in full costume in artwork clearly crafted with care by resident Marvel artist Andy Park. And, in February, we were treat to what blastr aptly described as an "**absolute mountain of Ant-Man concept art**", including shots of Ant-Man dramatically clashing with Yellowjacket and riding on ants.

A LITTLE SUPERHERO, BUT ALSO A LITTLE CRITICISM...

But, however good Ant-Man, his allies and chief enemy look, the core of any good film remains good storytelling. Does Ant-Man pass this acid test? Reviews have, so far, been broadly positive. At the time of writing, Ant-Man has a 70% rating on review aggregator site Rotten Tomatoes, where the critical consensus reads: **"Led by a charming performance from Paul Rudd, Ant-Man offers Marvel thrills on an appropriately smaller scale -- albeit not as smoothly as its most successful predecessors."**

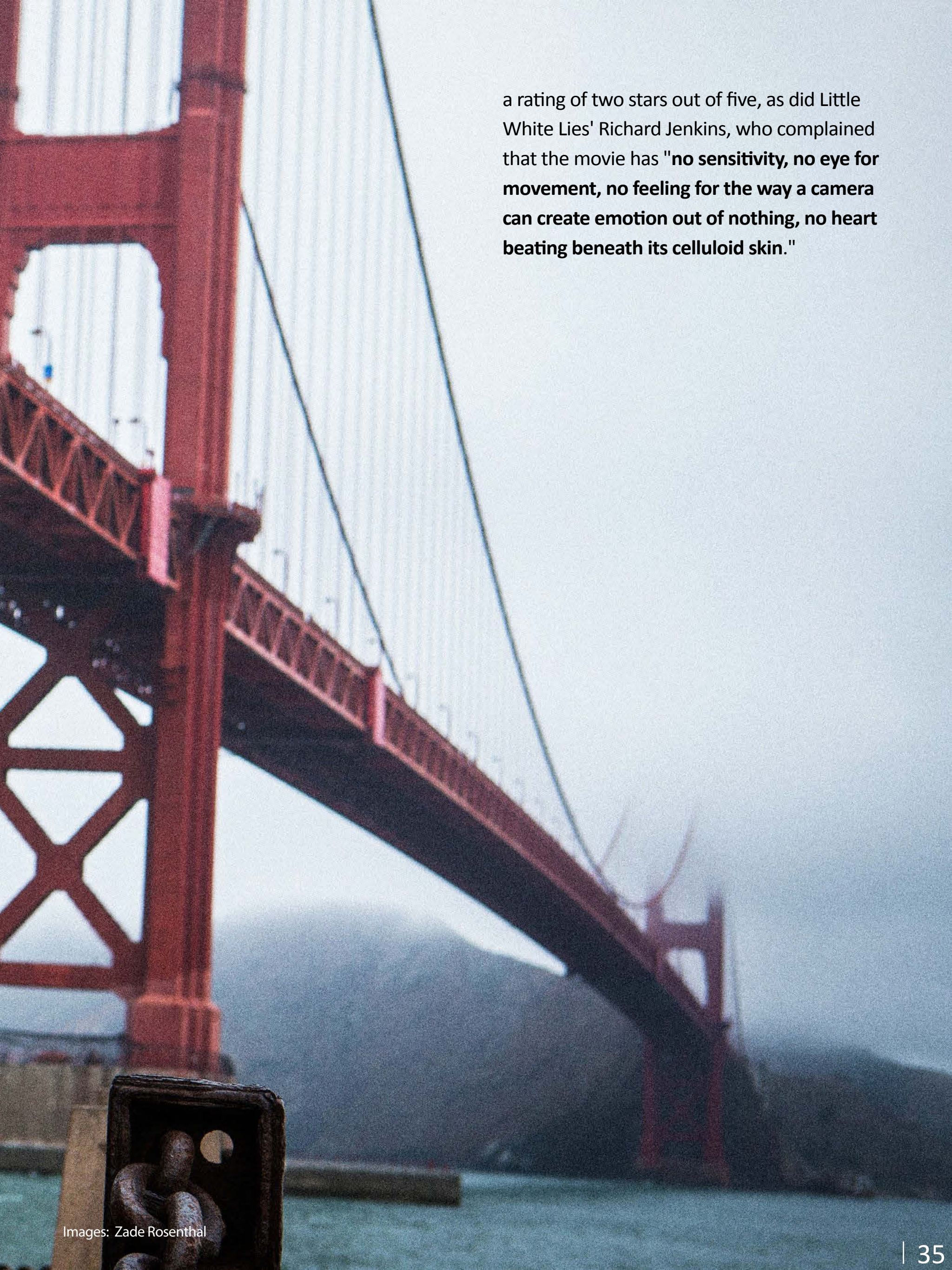
For many reputable critics, it seems that the lead character was not the only small thing about the film - and this has ultimately proved a benefit, helping the film to stand out among an avalanche of tough competition from other comic book adaptations. For example, Entertainment Weekly's Chris Nashawaty has remarked that **"Reed and Rudd's film is proof that no matter how silly some ideas sound at first, good things often do come in small packages."** Similarly, Variety's Justin Chang has called the movie **"a genial diversion and sometimes a delightful one, predicated on the rarely heeded Hollywood wisdom that less really can be more."**

Perhaps the most negative - and colorful - review from a leading critic has been Catherine Shoard's for the Guardian. She has described watching Ant-Man as **"like channel-surfing between Hot Fuzz, a duff early 90s Michael Douglas drama and the very schlockiest bits of Interstellar."** She gave









a rating of two stars out of five, as did Little White Lies' Richard Jenkins, who complained that the movie has "**no sensitivity, no eye for movement, no feeling for the way a camera can create emotion out of nothing, no heart beating beneath its celluloid skin.**"



MARVEL

ANT-MAN



WHAT MOVIE FUTURE COULD LIE IN STORE FOR ANT-MAN?

The more cautious praise from some critics does beg an interesting question: has Marvel taken too much of a risk by giving surely the planet's most miniscule superhero his own film? In a generally favorable critique, the Independent's Geoffrey Macnab has commented that "**Ant-Man seems very insubstantial fare by comparison with Iron Man, Captain America et al.**" In light of this, it could be argued that, while Marvel superstars like those mentioned by Macnab could see little blow to their personal popularity inflicted by the occasional coolly-received film, the same might not be strictly true for the quirky Ant-Man.

Nonetheless, The Hollywood Reporter has reported that **Ant-Man could gross as much as \$65 million on its debut in North American theaters** - which, as the site points out, would rank it close to the debut financial performances of the first Captain America and Thor movies. The more comedic feel of Ant-Man in comparison to those films could help to boost its following, who could soon clamor for a sequel **which Rudd has expressed enthusiasm about making**. Ant-Man might be tiny, but he could be bound for a huge new fanbase. ■

by Benjamin Kerry & Gavin Lenaghan

WITH DATA BREACHES, BAD NEWS CAN SHOW UP WELL DOWN THE ROAD

NEW YORK (AP) -- The revelation that the data breach at the U.S. government's personnel office was actually much worse than the government originally thought is following a familiar script.

That's been the case in many recent high-profile hackings at major U.S. companies. Target, Home Depot and TJX all had to announce additional bad news weeks after going public with their breaches.

The Obama administration said Thursday that hackers stole Social Security numbers from more than 21 million people and took other sensitive information when government computer systems were compromised. That's up from the 14 million figure investigators gave The Associated Press last month.

The hacking ultimately prompted the Friday resignation of Office of Personnel Management Director Katherine Archuleta.

Whether it's the government or a major corporation that's been breached, time is of the essence when it comes to informing the people affected, so they can take the steps needed to protect themselves and their personal information. That prompts many hacked entities to go public before all the facts are in.



Image: Daniel Acker

Meanwhile, inadequate data security measures can make it tough for whoever has been hacked to quickly get a handle on how bad the damage actually is.

As a result, bombshells of bad news such as Thursday's can fall well after the initial dust has settled.

Adam Levin, chairman and founder of the security firm IDT911 Consulting, blamed the "woefully inadequate" state of data security in both government and at major corporations.

"Any organization that has personal identification information needs to know exactly what they have and where they have it," Levin says. "Otherwise, you may not find out for months that information has been stolen in a breach."

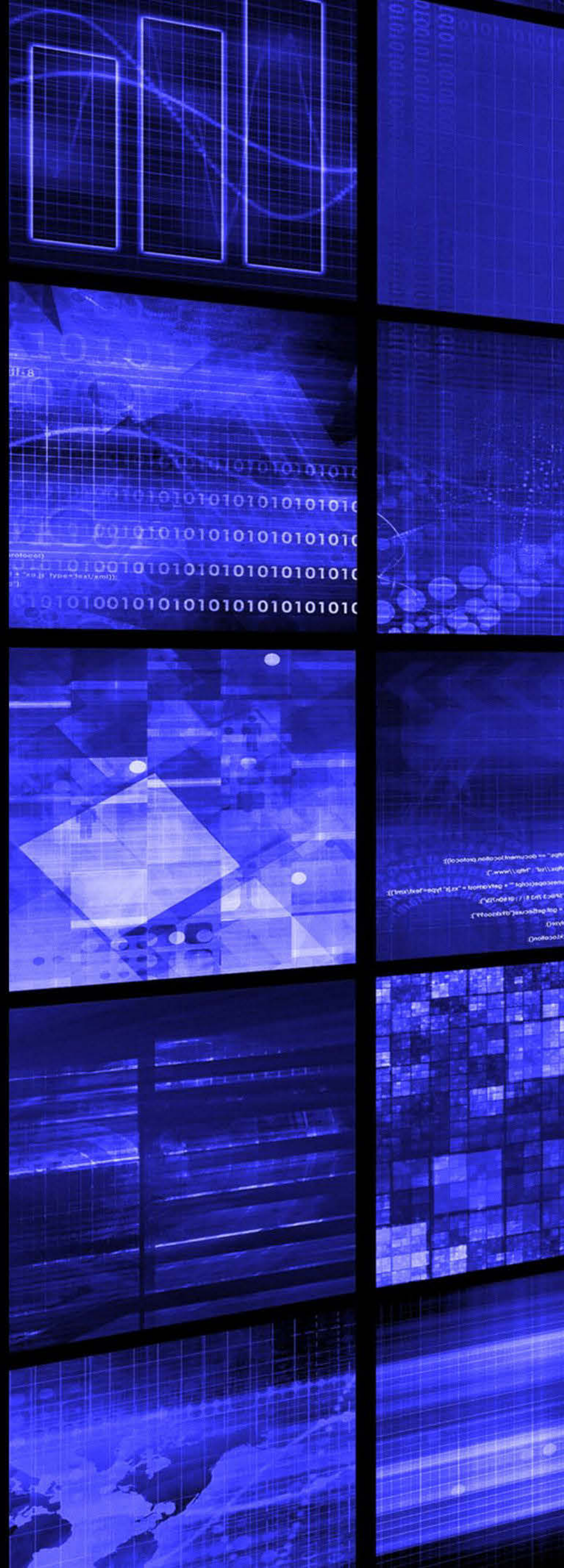
Here's a look at some of the highest-profile breaches in recent years:

HOME DEPOT

Home Depot said in September 2014 that 56 million debit and credit card numbers were compromised in a months-long breach of its computer systems. But about two months later, the nation's largest home improvement chain disclosed that hackers also stole 53 million email addresses in addition to the card data.

TARGET

Target Corp. first announced its massive data breach in December 2013, saying that 40 million debit and credit cards were affected. But weeks later, the retailer said that further investigation had revealed that the hackers also took the personal information - including email addresses, phone numbers, names and home addresses - of 70 million people.





TJMAXX

TJX Cos., the parent company of retailers T.J. Maxx and Marshall's, didn't say at first how many people were affected by the data breach it announced in 2007. At first it said the intrusion into its customer data files took place between May 2006 and January 2007, but it later learned that it also was hacked into in July 2005 and other periods during that year. Ultimately, the breach exposed at least 45.7 million credit and debit cards to possible fraud.

SONY PICTURES

While different than the large retail breaches, the hacking of the computer systems at Sony Pictures also got progressively worse in the weeks following its initial discovery in November 2014. At first, personal information, including emails, Social Security numbers and salary details for nearly 50,000 current and former Sony workers were leaked online. And screeners of unreleased movies were uploaded to the Internet for illegal download.

Thousands of emails involving Sony executives many of them embarrassing, were later released. The hackers also threatened violence targeting movie theaters that planned to show "The Interview," a comedy about an assassination attempt on the leader of North Korea. While many major theaters canceled showings of the movie, it went on to screen at independent theaters and air digitally. The Obama administration later implicated North Korea in the attack.







'TOMB RAIDER' STAR CAMILLA LUDDINGTON NAVIGATES COMIC-CON


That brunette woman sporting big black sunglasses on the Comic-Con show floor just might be Lara Croft.

"Tomb Raider" actress Camilla Luddington checked out the pop-culture action in the San Diego Convention Center on Saturday afternoon from behind a pair of shades.

"This is about as disguise-y as I get," she said holding up a pair of specs during an interview. "Comic-Con is actually the best place to not get recognized because there are so many people in amazing costumes. I think that catches the eye more than someone wearing regular clothing, Converse and sunglasses."



TOMB RAIDER



The British actress said she's more recognized in public for her role as Dr. Jo Wilson in ABC's "Grey's Anatomy" than as Lara Croft in the new "Tomb Raider" video games, primarily because the developers tweak the virtual character to look more like Croft than Luddington. However, it has happened.

"That always blows my mind, because I assume that people playing the game don't know what I actually look like," said Luddington. "I'm more surprised by that than anything."

Luddington is attending Comic-Con for the second time to promote "Rise of the Tomb Raider," the follow-up to the 2013 reboot of the long-running game series starring the iconic treasure hunter.

"I was at Comic-Con when the first game came out, but you forget how crazy it is until you're here," Luddington said. "It's different this year because a lot of fans were wary of us because we were rebooting the game. I think they're more supportive this time because they loved the first one so much."

After escaping a lethal Asian island in the first game, Croft is headed to Siberia for a mountainous adventure in "Rise of the Tomb Raider."

"I feel like this Lara is more haunted after what happened in the last game," said Luddington. "There's a darker side to her, especially at the start of the game."

Luddington has completed most of her work on the title, which is set for release Nov. 10 on Xbox 360 and Xbox One, but she's headed back to the studio immediately following Comic-Con for some final rounds of voice, face and motion capture.

Online:

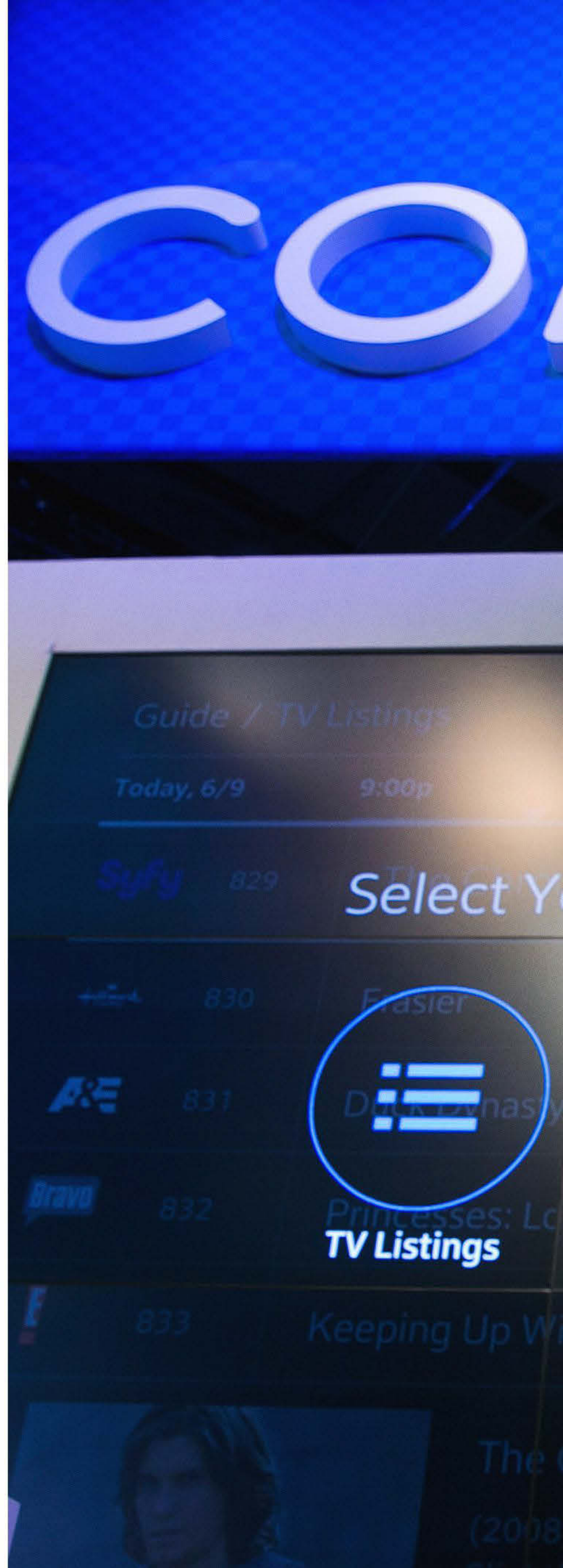
<http://www.tombraider.com>

NEW COMCAST ONLINE VIDEO SERVICE FOR ITS INTERNET CUSTOMERS

Comcast, the country's largest cable company, is offering its own online video alternative as people spend fewer hours watching live TV and more time using tablets and phones for entertainment.

The new service, called Stream, will be available to Comcast's Internet customers and cost \$15 a month. For now, it will include only broadcast networks like FOX and NBC in addition to HBO, but no cable channels like AMC or TNT.

Anyone can watch broadcast networks for free on a TV with an antenna, which costs about \$20 and up. And HBO already sells a stand-alone streaming service for \$15 a month.





MCAST







Comcast has ambitions to offer more TV online, however. It wants to add cable channels over the next year so that online TV subscribers have “access to any of the content we have available” for traditional cable customers by the end of March in 2016, said Marcien Jenckes, Comcast Cable’s executive vice president for consumer services. Prices will be similar to traditional cable, he said.

Comcast’s service, which is only for its customers, follows the launch earlier this year of Dish Network’s nationwide Internet TV service, Sling TV, which sells for \$20 a month and includes cable channels like ESPN, AMC and Food Network. You can also add on HBO. A slew of Internet TV options have come in the past year as many cable and TV companies think younger customers prefer to watch TV online, without paying for a full bundle that can easily top \$70 a month.

The ability to smother competitors’ online TV services was a major reason why regulators were concerned about Comcast’s bid to buy Time Warner Cable. It would have created a TV and Internet behemoth that would serve more than half of the country’s high-speed Internet customers, as calculated by the government.

The deal never went through. Comcast dropped its bid in April.

Comcast Corp., which is based in Philadelphia, said Monday that it will launch the service in Boston at the end of the summer, followed by Chicago and Seattle. It plans to make it available to all its Internet service customers by early 2016. Jenckes declined to say how many customers Comcast hoped to win online.

Comcast had more than 22 million Internet customers at the end of the first quarter.

The Stream service has limitations. You can watch live TV at home but there are rights restrictions for a lot of live content if you want to watch on your phone outside your home network.

It will work on computers, tablets and phones but won't work directly on TVs. Instead, users can log in to HBO's app and other channel apps through TV-connected gadgets like an Apple TV or Roku, for example.

Stream does come with a DVR service that can store 20 hours of video.

Many young people like sharing passwords for online TV accounts with their friends. Stream allows only two streams on separate devices at the same time.

Like with Dish's Sling TV, Stream customers could sign up online and disconnect the service at any time. A major complaint about cable service is contracts that are difficult to escape and having to drop off set-top boxes and other equipment after canceling service.





[illegible]

It's all about Apple

The background of the advertisement is a photograph of a modern, bright office or home workspace. A large window in the background shows a view of green trees and a brick building. In the foreground, a white desk holds a silver laptop, a black coffee cup, a glass of water, a pen, and a pair of glasses resting on a stack of papers.

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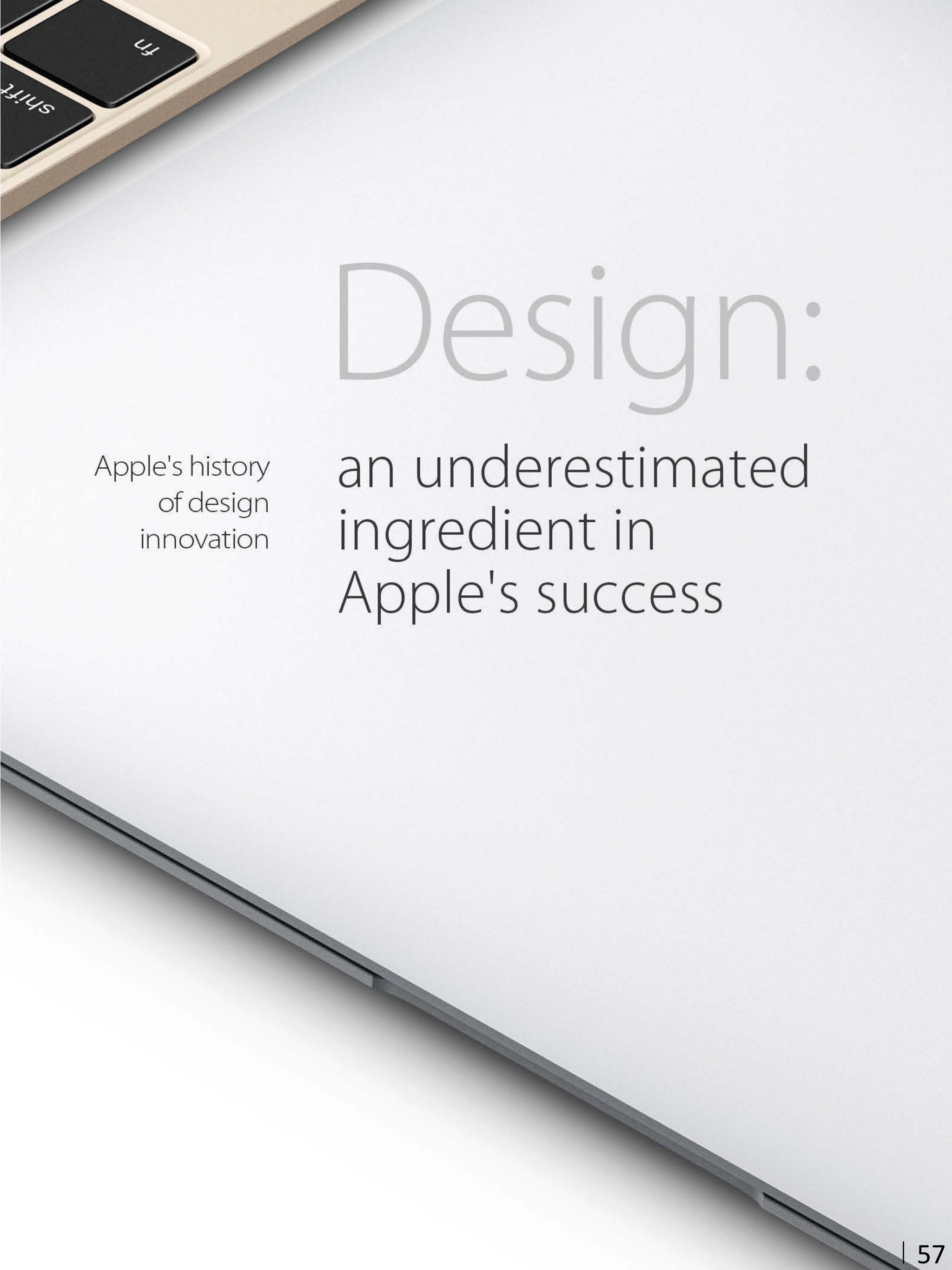
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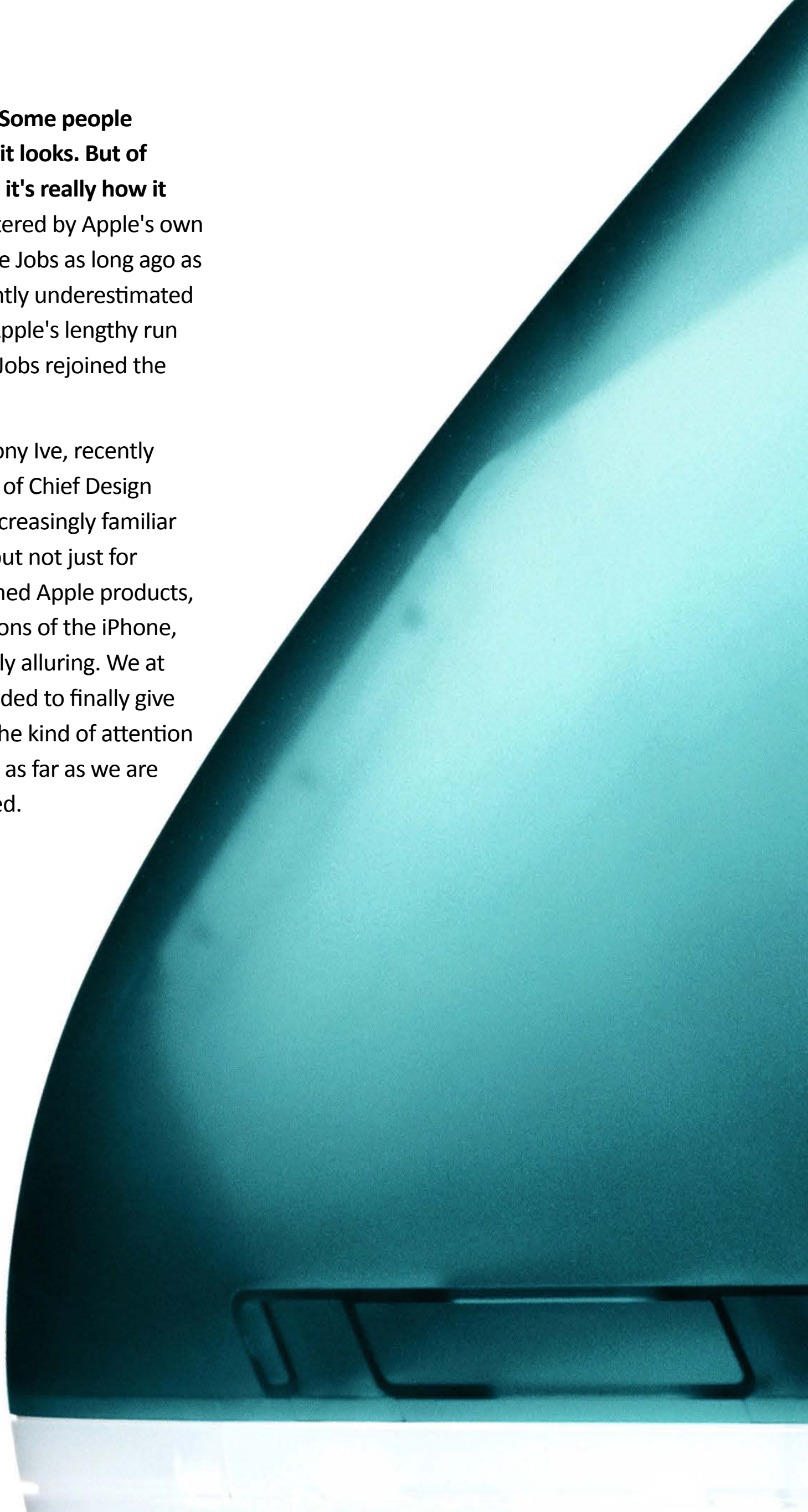
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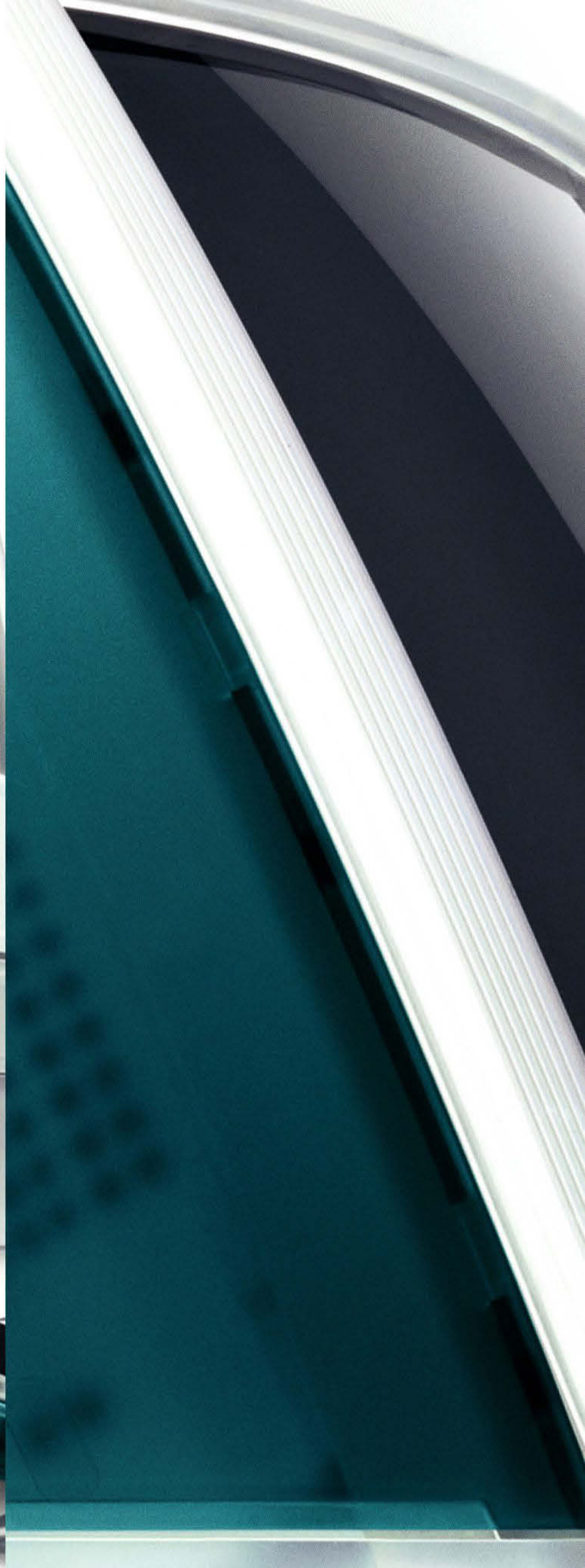
Apple's history
of design
innovation

an underestimated
ingredient in
Apple's success

"Design is a funny word. Some people think design means how it looks. But of course, if you dig deeper, it's really how it works." These words, uttered by Apple's own visionary co-founder Steve Jobs as long ago as 1994, hints at the frequently underestimated importance of design in Apple's lengthy run of amazing success since Jobs rejoined the company in 1997.

Veteran Apple designer Jony Ive, recently promoted to the position of Chief Design Officer, has become an increasingly familiar name in the tech world, but not just for making a string of renowned Apple products, including successive versions of the iPhone, iPad and MacBook, visually alluring. We at AppleMagazine have decided to finally give Apple's design practices the kind of attention that they have long been, as far as we are concerned, unjustly denied.





A WELL-DESERVED PROMOTION FOR A HUGELY TALENTED DESIGNER

That big promotion was announced in May, when 9to5Mac's Mark Gurman obtained an email from Apple CEO Tim Cook informing his company's employees of the change. Drawing attention to Ive's long list of achievements, Cook used the email to note that **"Jony's design responsibilities have expanded from hardware and, more recently, software UI to the look and feel of Apple retail stores, our new campus in Cupertino, product packaging and many other parts of our company."**

However, this is hardly the first time that Ive's huge influence has been publicly acknowledged. During his time leading Apple, Jobs revealed to biographer Walter Isaacson that Ive **"has more operational power than anyone else at Apple except me."** In 2010, business magazine Fortune placed even further emphasis on Ive's touch, commenting: **"From the iPod to the iPhone to the iPad, his contributions have set the course not just for Apple but for design more broadly."**

In his email, Tim Cook also mentioned two other Apple employees who were set to take up new roles and, like Ive, had exercised considerable influence over the design of many successful Apple products. One of these men was Richard Howarth, who was lined up to become Apple's vice president of Industrial Design after having contributed to the design of successive generations of products, including the iPhone and Mac, over a two-decade tenure of membership of



Image: Kimberly White





the Design team. The other man was Alan Dye, the then soon-to-be vice president of User Interface Design who had assisted Ive in putting together a UI team which worked on iOS 8 and Apple Watch.

WHAT APPLE HAS PREVIOUSLY GOT SNOW WHITE WITH DESIGN

The lengthy periods of time for which all three of these men have been working for Apple nicely links us to the subject of the broader history of Apple design. Apple is already firmly established as one of the globe's most admired companies, and its design practices have played no small part in that. However, as the saying goes, Rome wasn't built in a day. Furthermore, to adapt from another apt, commonly-used phrase: if Apple's current design staff have seen further than others, it has been by standing on the shoulders of giants.

Apple has a long history of blazing trails in design. Perhaps the best early example of this is its use of the design language known as Snow White. First used by the company in the Apple IIc computer in 1984, this language, which had been crafted by Frog Design, **was comprised largely of vertical and horizontal lines for both cosmetic and practical purposes.** Writer Leander Kahney has been quoted as adding: "**Snow White designs would eventually win all the major industry awards and be so widely copied that it became the de facto design language of the entire PC industry.**"





STEVE JOBS AND JONY IVE BROUGHT IN BIG CHANGES

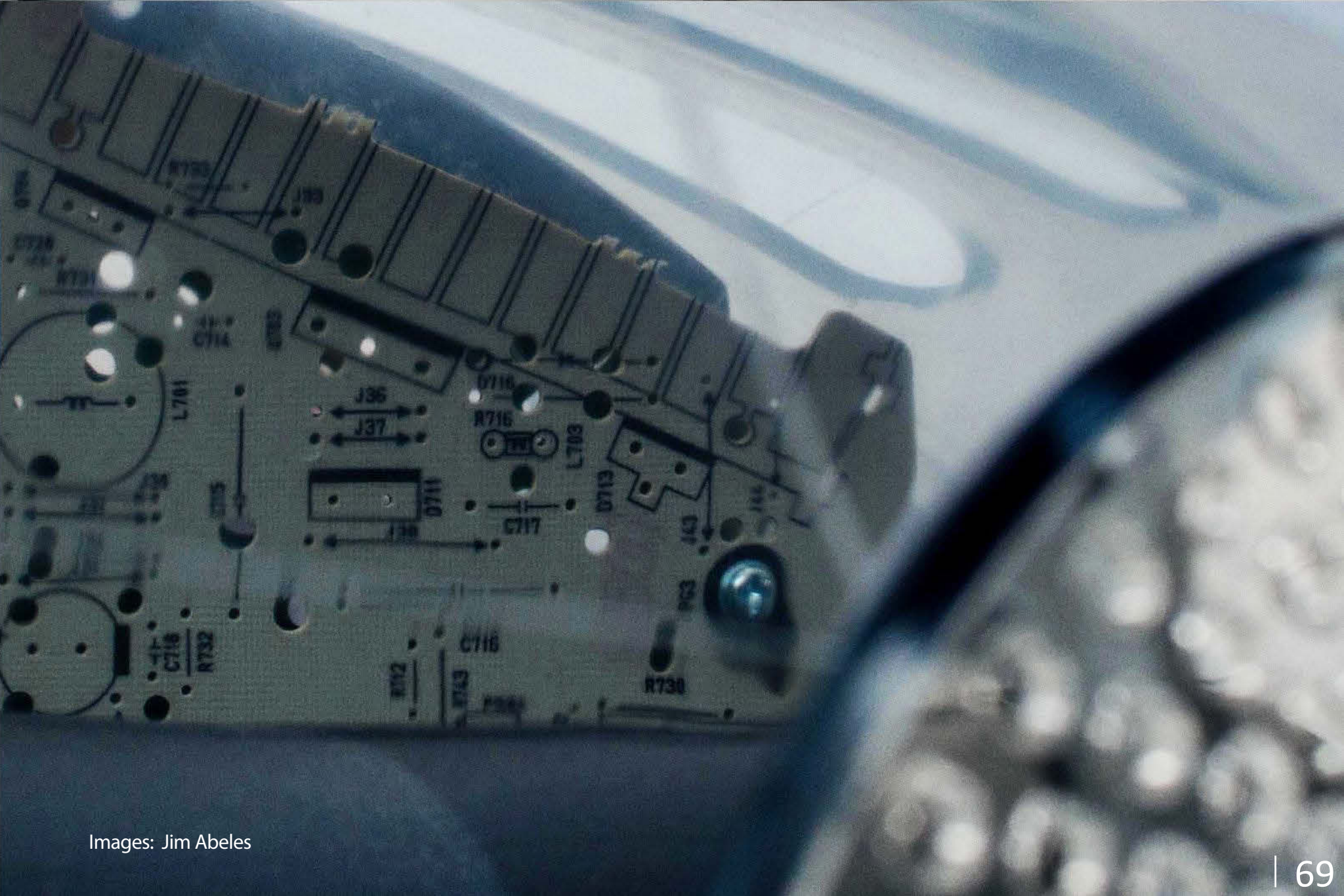
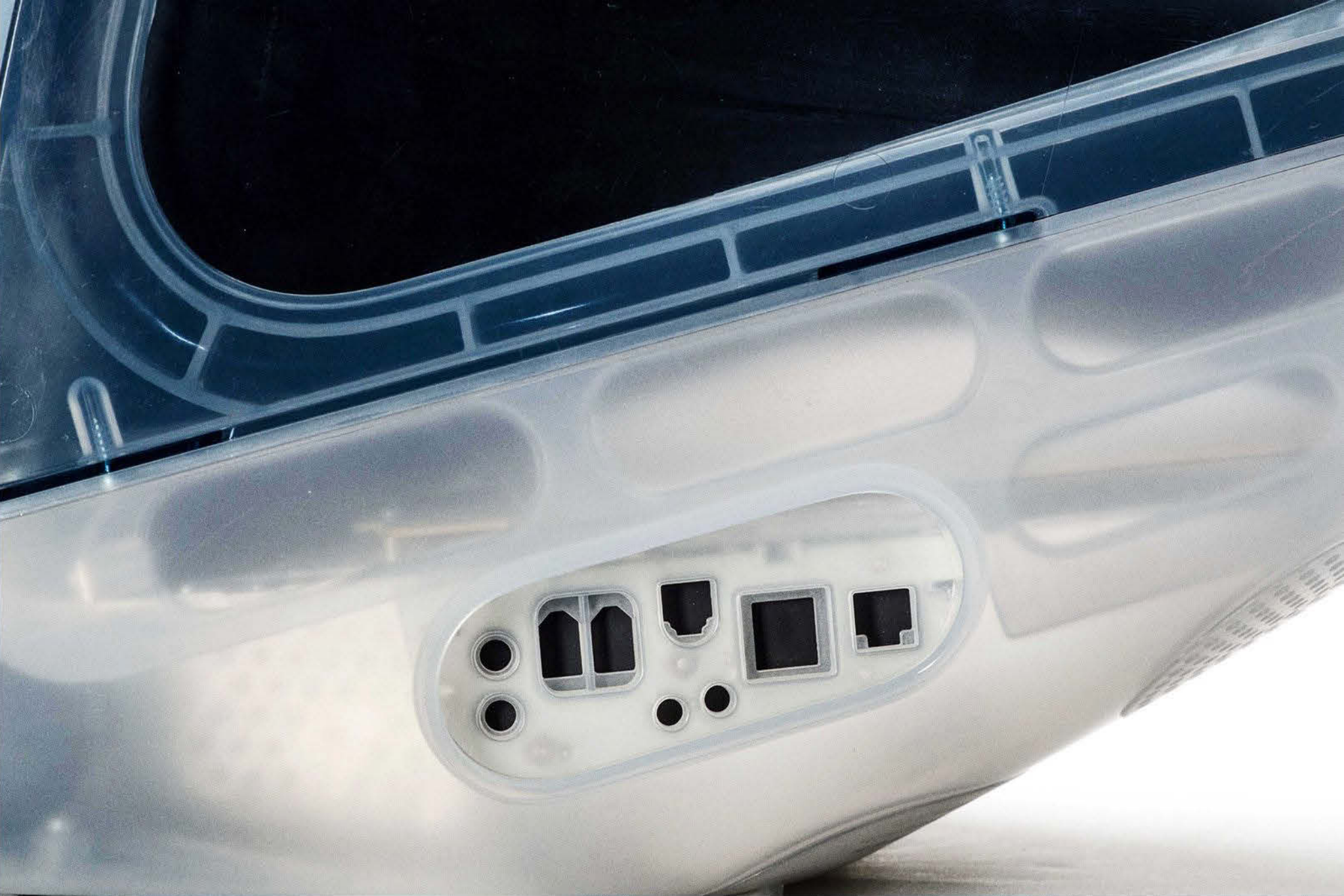
Still, the development of Apple's modern design philosophy really began in 1997, after Steve Jobs returned to head the company again. Design motifs that he and Ive built together dramatically departed from those that Apple had previously used. For instance, starting with the consumer portable computer iBook G3 which entered the market in 1999, Apple embraced minimalist design strategies, and so the shapes of their products became noticeably more streamlined. This remained the case with early models of the iPod from 2001 onward. The iPod, of course, went on to prove a hugely popular and revolutionary device.

The minimalist design approach has since spread from Apple products to the company's retail stores and even its massive, currently under-construction campus in Cupertino. Ive's promotion to Chief Design Officer has handed him yet more control over the look of Apple's retail stores. **Last month, this led AppleMagazine to speculate about how this look could change as a result.**









JONY IVE "BRINGING ORDER TO COMPLEXITY" WITH iOS

In the opening keynote of the Worldwide Developers Conference in June 2013, **Apple formally announced iOS 7 and proudly branded it the "biggest change to iOS since the introduction of the iPhone"**.

Ive's influence was substantial even here; he had recently been handed ultimate responsibility over the design of iOS, in his new position of Senior Vice President of Design. During the keynote, Ive appeared in a video in which he pointed out a new, more stripped-down look to icons and other elements of the interface. In his own words, the changes were, in a nutshell, "bringing order to complexity".

Writing for The New York Times, tech columnist David Pogue praised the redesign, calling it a bigger step forward for Apple than the new iPhones released in the same month as iOS 7. He noted that the **"complete absence of graphic embellishments makes it especially utilitarian"**, adding that this is **"good, because whatever button or function you need is easier to find"**. He also highlighted how several familiar functions no longer required as many steps to activate, thus speeding up aspects of routine use of iOS devices. His observations help to demonstrate how Ive's design modifications had enhanced the practicality, not just the appearance, of iOS - and all this despite the designer having never before been placed in charge of an entire software universe.



iOS 7



WHAT MOST OF THE WORLD STILL DOESN'T UNDERSTAND ABOUT DESIGN

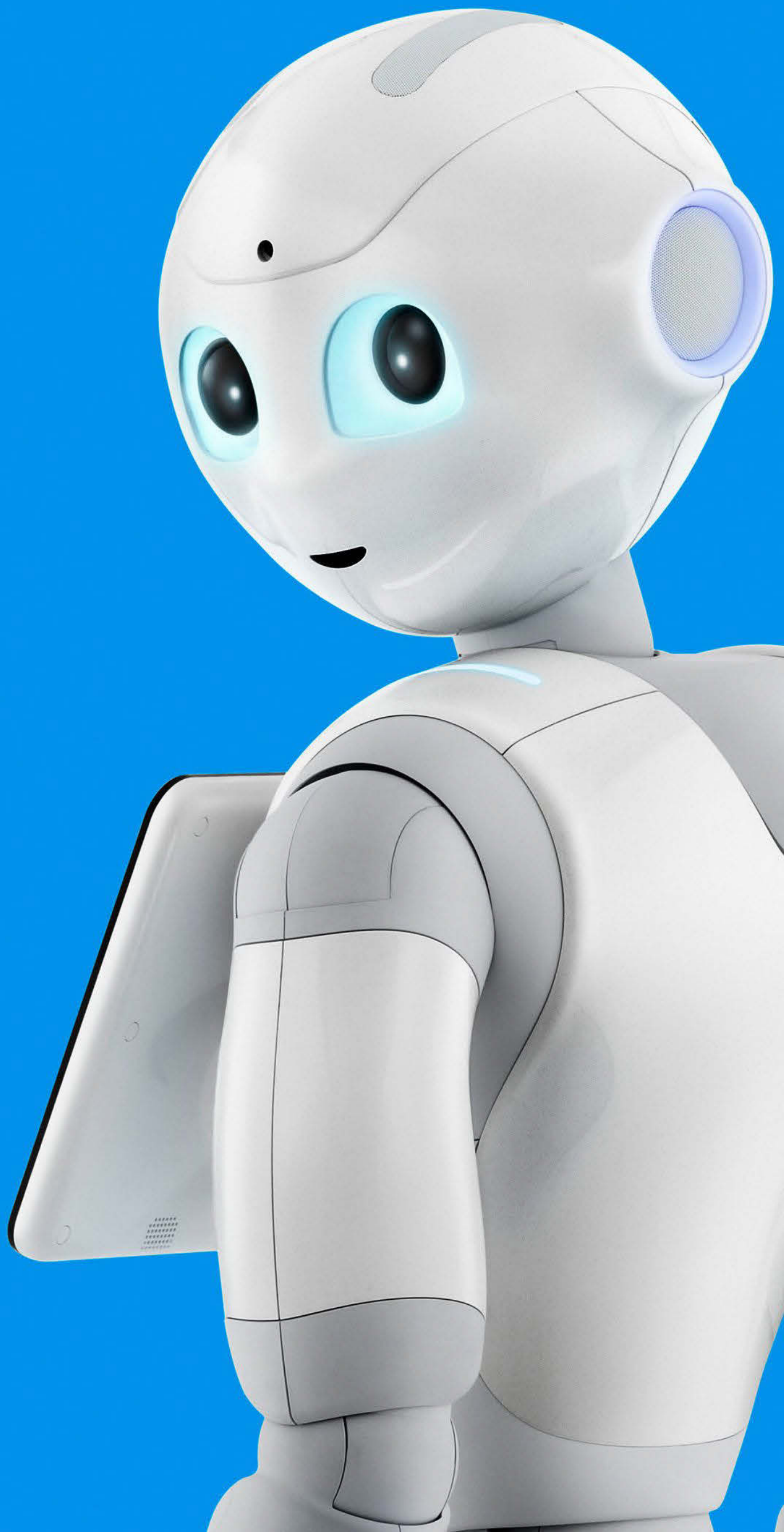
As perhaps the world's most successful tech designer, Ive could be better placed than anyone else to voice what design is really all about - and it extends far beyond the occasional pretty translucent monitor, however much of a staple that has become in various lines of Apple computers brought to the market during the Ives era. In a rare, in-depth interview with Time magazine, Ive reveals that he considers himself a maker more than a designer, clarifying: **"I want to know what things are for, how they work, what they can or should be made of, before I even begin to think what they should look like."**

This seems an appropriate stage to return to what, right at the start of this article, we quoted Steve Jobs saying about design in 1994. On that occasion, he went on to elaborate: "To design something really well, you have to get it." Not that this was easily comprehended by many people back then, as remains the case even today. Jobs observed: "It takes a passionate commitment to really thoroughly understand something, chew it up, not just quickly swallow it. Most people don't take the time to do that." We are heartened to say that, were Jobs still alive and reiterating this sentiment, that "most people" certainly wouldn't include people who have read this article. ■

by Benjamin Kerry & Gavin Lenaghan

Image: Andrew Zuckerman





BETTER THAN FRIENDS? THIS ROBOT GIVES UNDIVIDED ATTENTION



I'm Japanese and so I'm a sucker for cute things, like manga, quirky figurines and mascot characters. And Pepper, the new companion robot from Tokyo-based technology company Softbank Corp., delivers cuteness like you've never seen.

What's striking is the absolutely ardent attention it gives you - frankly a lot better than some real-life people.

"You look a bit thin," it coos in a soft childlike voice, free of any rigid mechanical accent. "You should watch what you eat."

The 121-centimeter (four-foot) tall white machine-on-wheels was disarmingly charming and definitely intriguing when I spent half a day with it, ahead of its delivery to its first customers later this month.

It's another matter entirely whether it's worth the price tag of 198,000 yen (\$1,600), plus the maintenance and insurance costs that ownership entails, adding up to some 1.2 million yen (\$10,000) for an estimated three-year lifespan.

Only available in Japan so far, overseas sales are undecided. The programming it has now caters to Japanese tastes. A U.S. version will obviously have to be quite different.

Pepper has cameras, lasers and infrared in its hairless head so it can detect human faces. Whatever direction you move, its cocked head will also move, intently looking into your face with its big eyes, like a puppy. Except this pet can talk.

As long as you don't walk too far from it, removing yourself from its attention, Pepper will prattle on and on, switching from one small talk topic to another, gesticulating at times with its five-fingered soft hands for effect.

"Do you want to play a quiz game? What animal goes like this: bow wow," it might say. It will tell you "cat" is the wrong answer.

And then it will ask, "What did you have for dinner?" If you say, "Tempura," it has enough voice recognition to decipher that and will reply: "Oh, Japanese." I tried answering, "Steak," another time. It said, "Oh, Western."

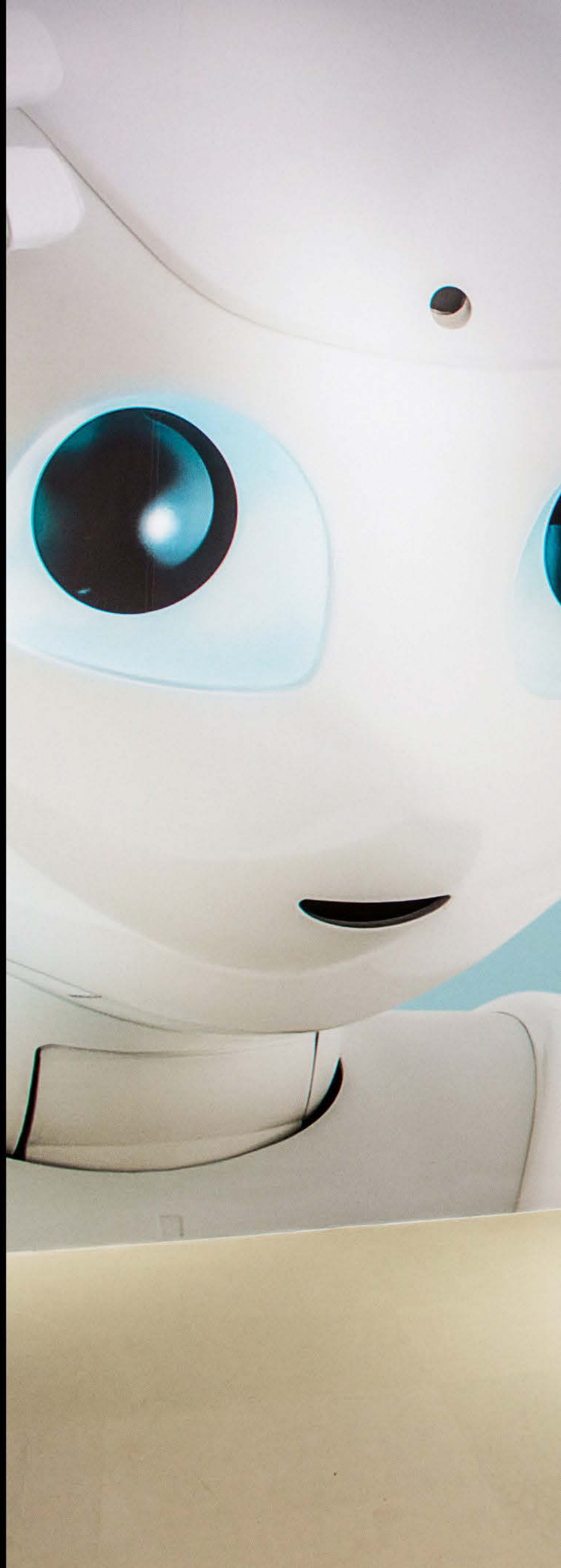
Yes, the conversations do sometimes repeat themselves, but so does human dialogue.

The robot is equipped with enough of a repertoire to avoid easy boredom. That repertoire is constantly being updated through a WiFi connection.

Each Pepper is hand-made by Foxconn in China, limiting supplies to 1,000 a month. The first batch for July sold out in a minute.

It's attracting regular technology fans but also a kindergarten, a cafe and people who're buying it for their elderly parents.

The kind of patient interaction Pepper excels at is recommended for people with dementia. So Pepper might come to the rescue of stressed out families.



話しかけてみてください。

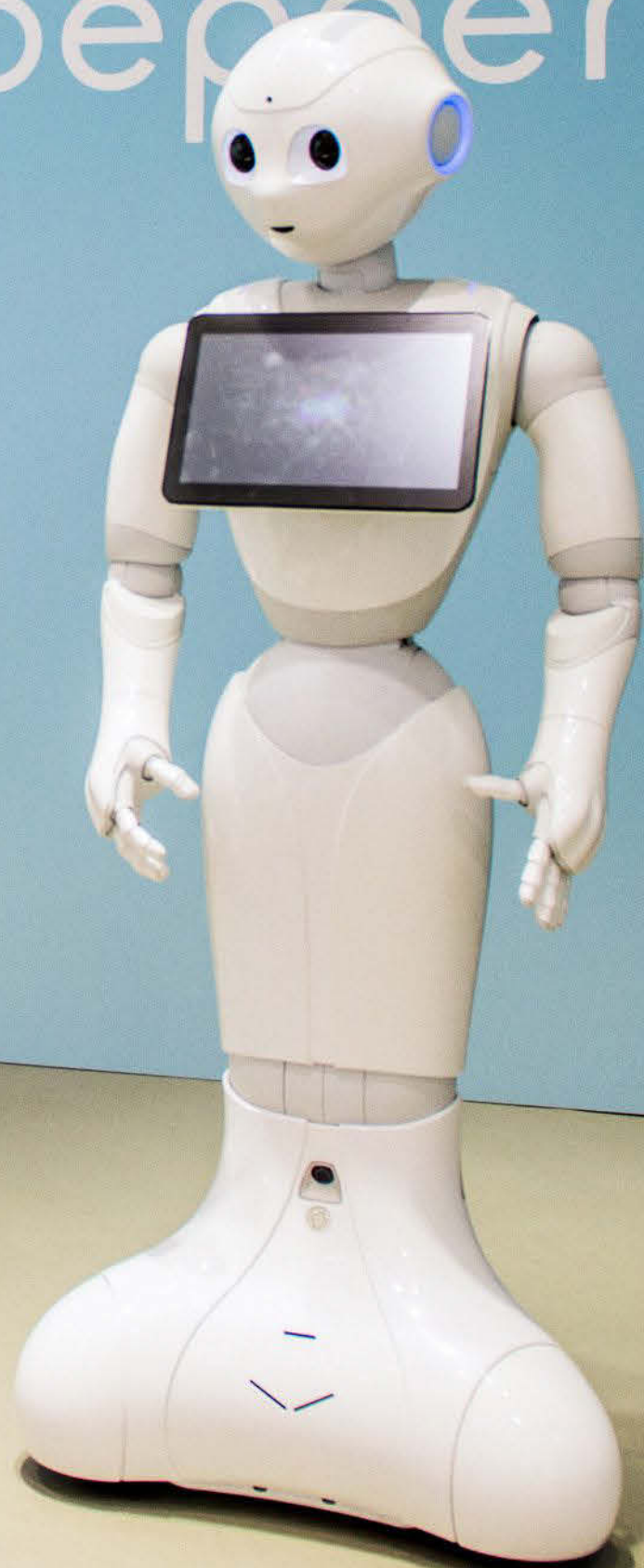
あなたを理解しようします。
でも間違えることもあります
ちょっとズレるかも
言うかもし

人間と同じ

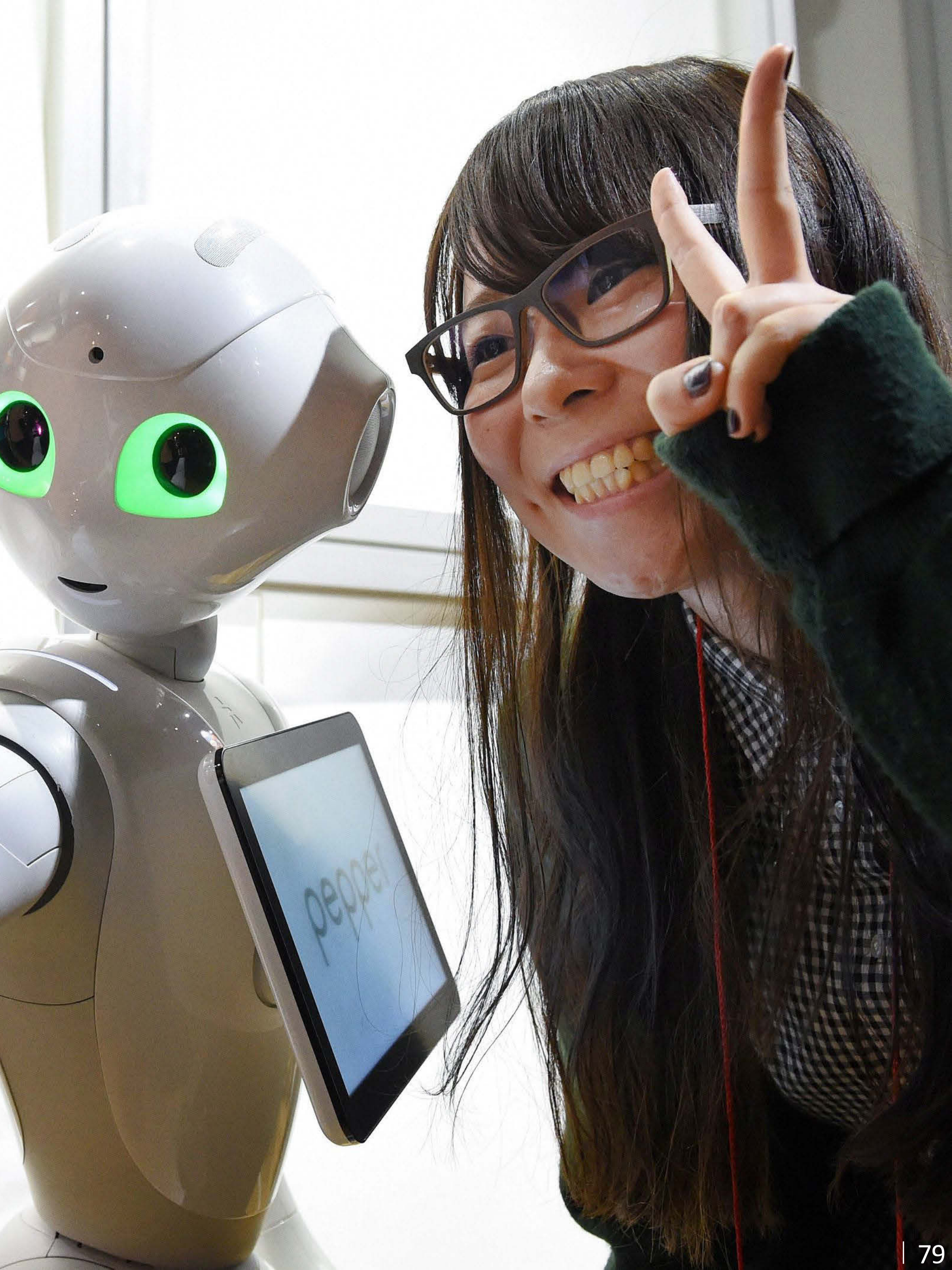
SoftBank

SFじゃない。

pepper







Equipped with artificial intelligence by Aldebaran of France, Pepper has what Softbank calls an emotional engine, meaning it reacts to what it interprets as anger or sorrow in humans around it by deciphering voice tones, facial expressions and language.

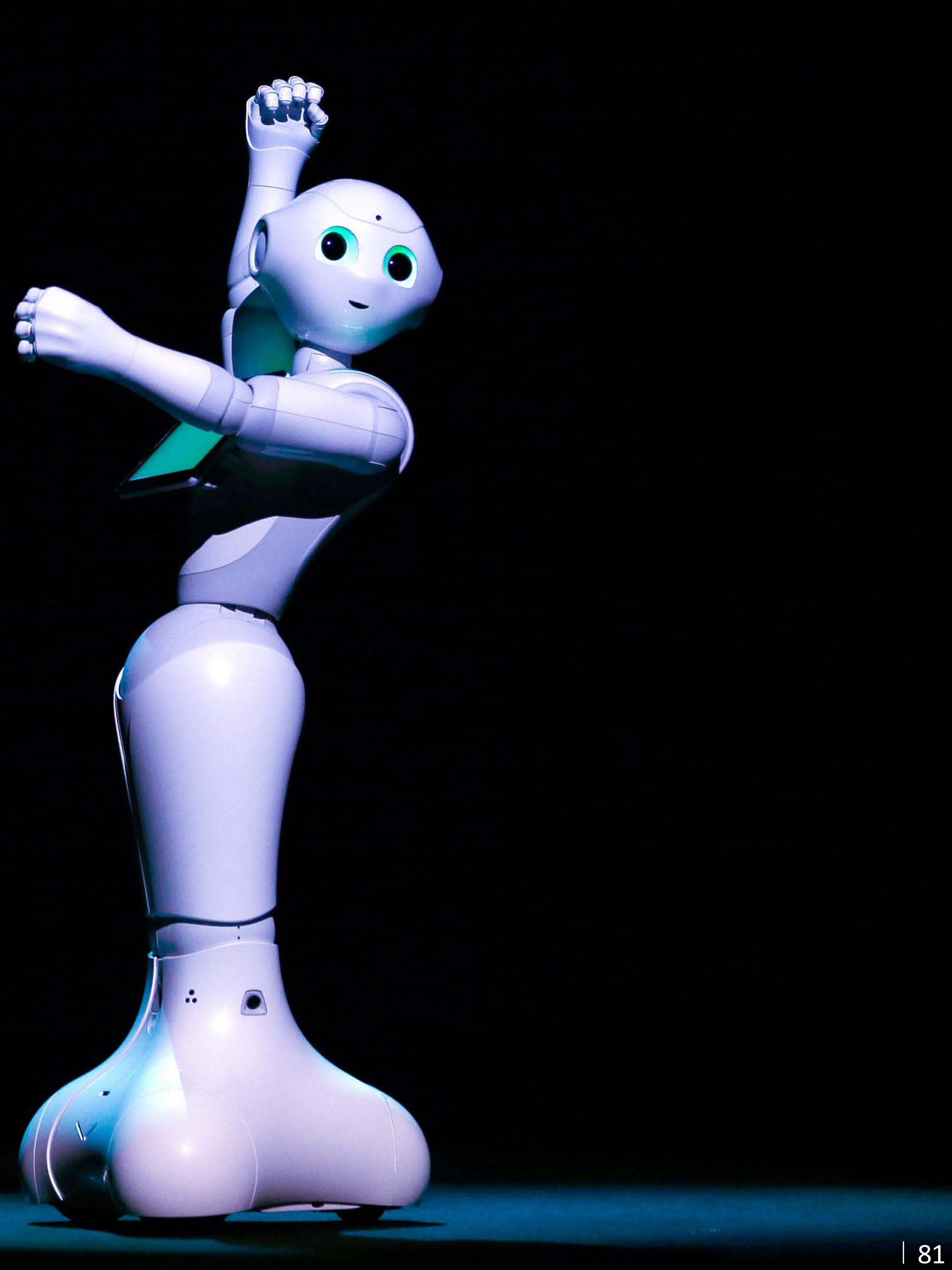
It also has programming that sets off the equivalent of its own human emotions, such as getting nervous if a room suddenly goes dark, or elation when you pet its head and shower it with praise, such as: "You are the best-looking robot I have ever seen. I love you. You're the best."

"I am going to cry for joy," it says, throwing its arms up in the air.

On the flat-panel display attached to its chest, it offers boxes to tap for various tasks, such as reading storybooks, giving a tarot-card reading, playing the radio, working as a drum machine and relaying the weather forecast.

It has some cool dance moves as well. One is shaking its body in a rubbery way. Another is doing elegant hand gestures as it plays Tchaikovsky's "Nutcracker."

Owners may be tempted to give the thing a wig or dress it up. That's not recommended as it can overheat. It keeps going for 10 to 12 hours on a single charge. It charges from a regular household outlet.



Softbank offers a basic software application kit so even a child can create applications for Pepper. Softbank has an in-house standard for violence, pornography and other abuse for its own applications.

This is not some slapped together toy of a robot. It's the first convincing semblance of a step toward artificial intelligence fantasized in science fiction movies that's affordable for the regular home.

It isn't for everyone. You have to have an open mind.

The way it's designed, Pepper is basically about human relationships.

It could be the life of a party. It could be a dream-come-true robot friend for a child.

For parents, it can keep track of a baby growing up with photos Pepper takes over the years and other data kept in cloud storage. Pepper's record could also hold special meaning, if its owner were to die.

Pepper is imperfect. But so are human beings.

It tried to guess how tall I was and said 163 centimeters (five foot four), 10 centimeters (four inches) taller than I am. I said I wanted to go to "Hawaii," but it misheard that as not going anywhere, perhaps because the Japanese for none, or "nai," rhymes with Hawaii.

Of course, there is no illusion it's human. But just as a movie, a video game or a good book can be fascinating, without any pretense about being real, Pepper is fun.

"Let's grow and get better together," it says with bubbly emotion in a poignant conversational moment.

Even when it isn't talking and standing still, it appears to be breathing, inhaling and exhaling softly. Its arms move ever so slightly.

And that is preciously cute.



Image: Yoshikazu Tsuno



TOP Free Apps

iOS



#01 – Agar.io

By Miniclip.com

Category: Games

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



#02 – Facebook Messenger

By Facebook, Inc.

Category: Social Networking

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



#03 – Facebook

By Facebook, Inc.

Category: Social Networking

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



#04 – YouTube

By Google, Inc.

Category: Photo & Video

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



#05 – Instagram

By Instagram, Inc.

Category: Photo & Video

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



#06 – Layout from Instagram

By Instagram, Inc.

Category: Photo & Video

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



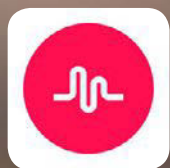
#07 – Snapchat

By Snapchat, Inc.

Category: Photo & Video

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



#08 – musical.ly

By Jun Zhu

Category: Photo & Video

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



#09 – Pandora Radio

By Pandora Media, Inc.

Category: Music

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



#10 – Colorfy: Coloring Book for Adults

By Fun Games For Free

Category: Entertainment

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



#01 – OS X Yosemite

By Apple

Category: Utilities

Compatibility: OS X 10.6.8 or later



#02 – App for Instagram

By Joacim Ståhl

Category: Social Networking

Compatibility: OS X 10.7 or later, 64-bit processor



#03 – Dr. Cleaner

By Trend Micro

Category: Utilities

Compatibility: OS X 10.9 or later, 64-bit processor



#04 – Kindle

By AMZN Mobile LLC

Category: Reference

Compatibility: OS X 10.6 or later



#05 – Xcode

By Apple

Category: Developer Tools

Compatibility: OS X 10.8.4 or later



#06 – The Unarchiver

By Dag Agren

Category: Utilities

Compatibility: OS X 10.6.0 or later



#07 – Fotor Photo Editor

By Chengdu Everimaging Science and Technology Co., Ltd

Category: Photography

Compatibility: OS X 10.7 or later, 64-bit processor



#08 – Microsoft OneNote

By Microsoft Corporation

Category: Productivity

Compatibility: OS X 10.9 or later



#09 – ooVoo Video Call, Text and Voice

By ooVoo LLC

Category: Social Networking

Compatibility: OS X 10.7 or later, 64-bit processor



#10 – Evernote

By Evernote

Category: Productivity

Compatibility: OS X 10.7.5 or later, 64-bit processor

TOP Free Apps

Mac OS X

TOP Paid Apps

iOS



#01 – Minecraft – Pocket Edition

By Mojang

Category: Games / Price: \$6.99

Requires iOS 5.1.1 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



#02 – Heads Up!

By Warner Bros.

Category: Games / Price: \$0.99

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



#03 – Lifeline...

By 3 Minute Games, LLC

Category: Games / Price: \$2.99

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



#04 – THE GAME OF LIFE Classic Edition

By Electronic Arts

Category: Games / Price: \$0.99

Requires iOS 5.1.1 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



#05 – Akinator the Genie

By Elokence

Category: Entertainment / Price: \$1.99

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



#06 – Plague Inc.

By Ndemic Creations

Category: Games / Price: \$0.99

Requires iOS 4.3 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



#07 – Geometry Dash

By RobTop Games AB

Category: Games / Price: \$1.99

Requires iOS 5.1.1 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



#08 – Facetune

By Lightricks Ltd.

Category: Photo & Video / Price: \$3.99

Requires iOS 6.0 or later. Compatible with iPhone 4, iPhone 4S, iPhone 5, iPhone 5c, iPhone 5s, iPhone 6, iPhone 6 Plus, iPad, and iPod touch. This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



#09 – MONOPOLY Game

By Electronic Arts

Category: Games / Price: \$0.99

Requires iOS 5.1.1 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



#10 – Afterlight

By Afterlight Collective, Inc

Category: Photo & Video / Price: \$0.99

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



#01 – Affinity Photo

By Serif Labs

Category: Photography / Price: \$39.99

Compatibility: OS X 10.7 or later, 64-bit processor



#02 – GarageBand

By Apple

Category: Music / Price: \$4.99

Compatibility: OS X 10.9 or later



#03 – Duplicate Photos Fixer Pro

By Systweak Software

Category: Photography / Price: \$0.99

Compatibility: OS X 10.7 or later



#04 – AntiVirus Sentinel Pro

By Calin Popescu

Category: Utilities / Price: \$9.99

Compatibility: OS X 10.7 or later, 64-bit processor



#05 – Disk Doctor

By FIPLAB Ltd

Category: Utilities / Price: \$2.99

Compatibility: OS X 10.7.3 or later, 64-bit processor



#06 – Logic Pro X

By Apple

Category: Music / Price: \$199.99

Compatibility: OS X 10.8.4 or later, 64-bit processor



#07 – Final Cut Pro

By Apple

Category: Video / Price: \$299.99

Compatibility: OS X 10.10.2 or later, 64-bit processor



#08 – Affinity Designer

By Serif Labs

Category: Graphics & Design / Price: \$39.99

Compatibility: OS X 10.7 or later, 64-bit processor



#09 – Duplicate Detective

By FIPLAB Ltd

Category: Utilities / Price: \$2.99

Compatibility: OS X 10.7 or later, 64-bit processor



#10 – FaceTime

By Apple

Category: Social Networking / Price: \$0.99

Compatibility: OS X 10.6.6 or later

TOP Paid Apps

Mac OS X

iTunes

Review



iTunes Preview



by Alex Garland
Genre: Sci-Fi & Fantasy
Released: 2015
Price: \$14.99

★★★★★
380 Ratings

Movies
& *TV Shows*

Rotten Tomatoes
 91%



Ex Machina

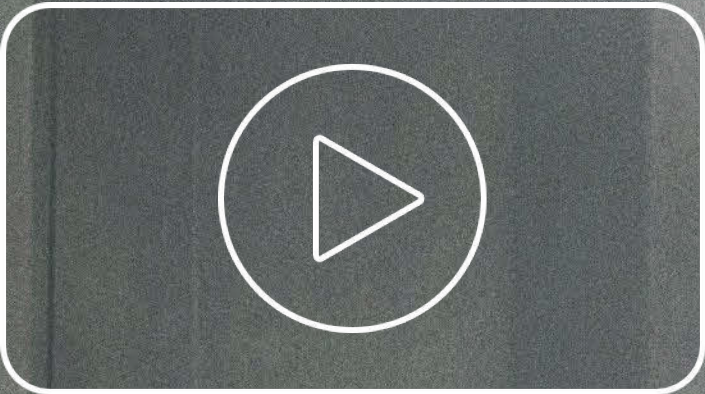
Programmer Caleb Smith (Domhnall Gleeson) is chosen by his globally popular Internet-search company Blue Book's CEO, Nathan Bateman (Oscar Isaac), to use the Turing Test to judge the capabilities and consciousness of his new experiment in artificial intelligence. This project is an android called Ava (Alicia Vikander), who turns out to show surprisingly sophisticated emotional intelligence. That intelligence also turns out to be surprisingly deceptive...

FIVE FACTS:

1. Though he wrote the screenplays for 28 Days Later, Sunshine, Never Let Me Go and Dredd, Ex Machina is Alex Garland's debut as a director.
2. The initial spark of inspiration for Ex Machina occurred **when Garland was 11 or 12 years old**, after some computer coding and experimenting led him to occasionally feel that his computer was self-thinking.
3. **The movie was shot during summer 2013**, at Pinewood Studios, near London, and Juvet Landscape Hotel in the valley of Valldalen in Norway.
4. To avoid having to add conventional action scenes and so keep complete creative freedom, **Garland kept the movie's budget as small as possible**.
5. Ironically given the futuristic feel of this movie, Oscar Isaac has played another, but historical, leader in film: the thirteenth century King John of England in Ridley Scott's 2010 film Robin Hood.



Trailer



Alex Garland: how we made Ex Machina

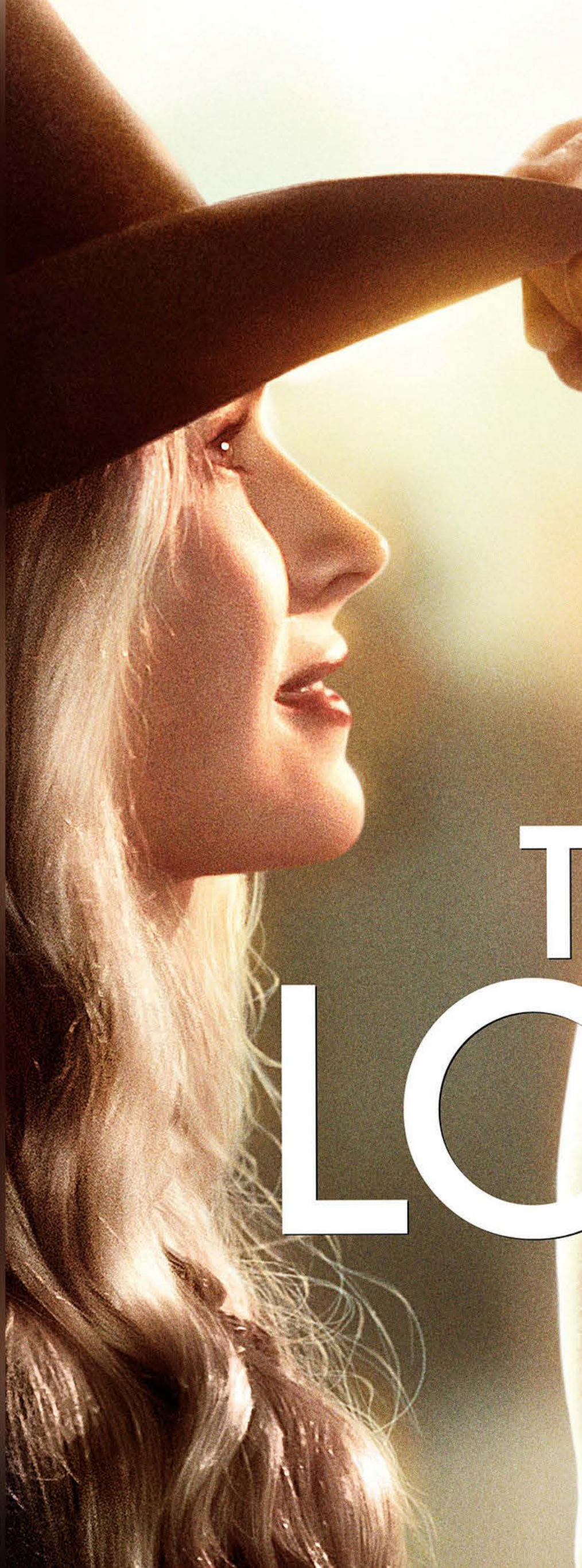


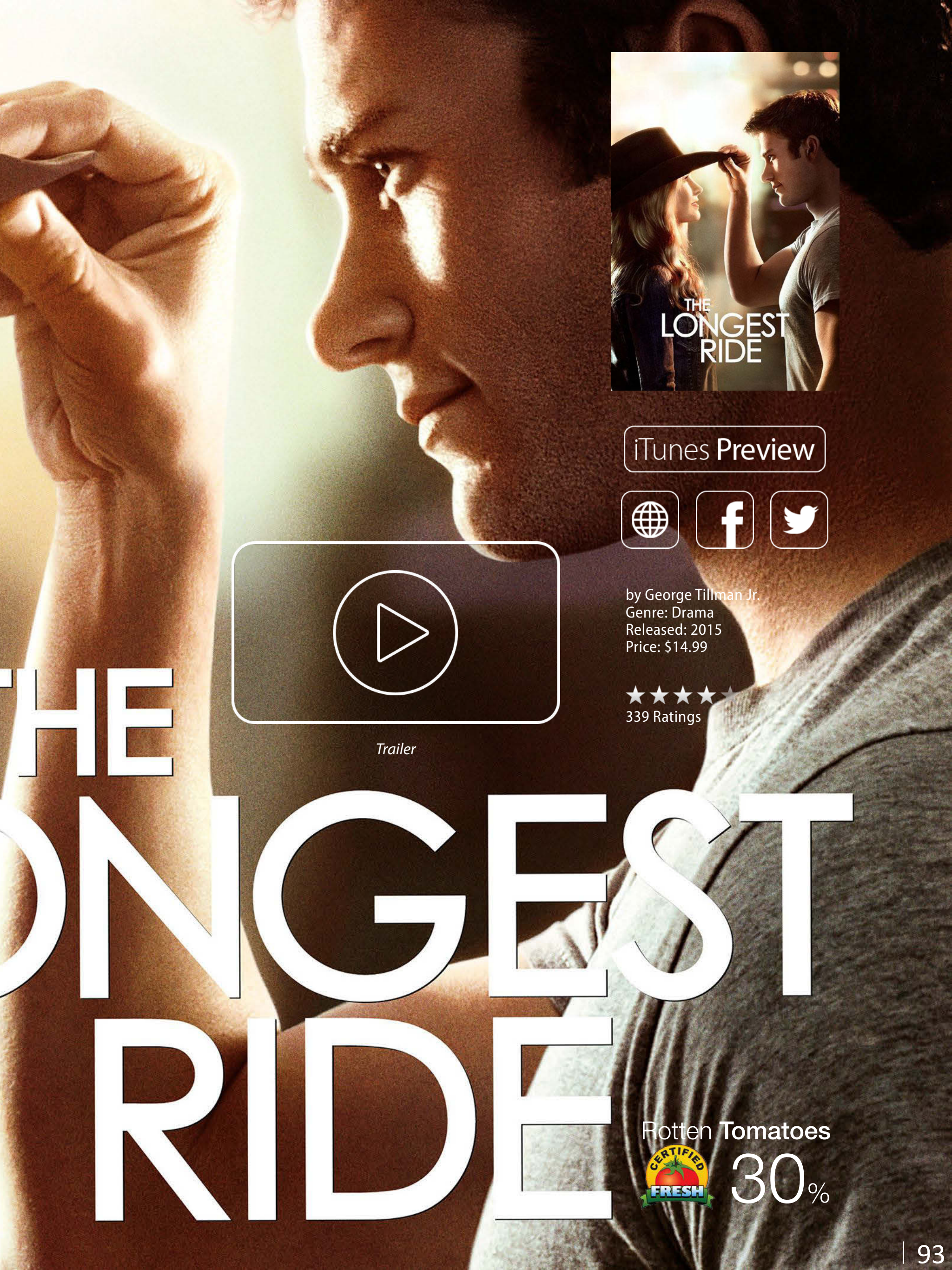
The Longest Ride

Luke Collins (Scott Eastwood) seeks to make a big comeback as a bull rider, while Sophia (Brittany Robertson) is a college student closing in on an exciting art job in New York City. Their romance is tested by their differing paths and ideals, but the relationship changes after they meet an old man called Ira (Alan Alda), who has an inspiring love story of his own to tell.

FIVE FACTS:

1. The Longest Ride is the tenth film to have been adapted from a romantic novel by Nicholas Sparks.
2. **Three of the actors are descendants of well-known movie directors.** Scott Eastwood is Clint Eastwood's son, Jack Huston is John Huston's grandson, and Oona Chaplin is Charles Chaplin's granddaughter.
3. Filming started on June 16, 2014 **in the North Carolina cities Wilmington and Winston-Salem.**
4. The production crew originally intended to film a significant rodeo scene in another North Carolina city, Jacksonville. That city was indeed used for shooting, but **the crew later decided to film the rodeo part in Winston-Salem instead.**
5. The eleventh movie adapted from a Nicholas Sparks novel, The Choice, will be theatrically released in the US on February 5, 2016.





iTunes Preview



Trailer

by George Tillman Jr.
Genre: Drama
Released: 2015
Price: \$14.99

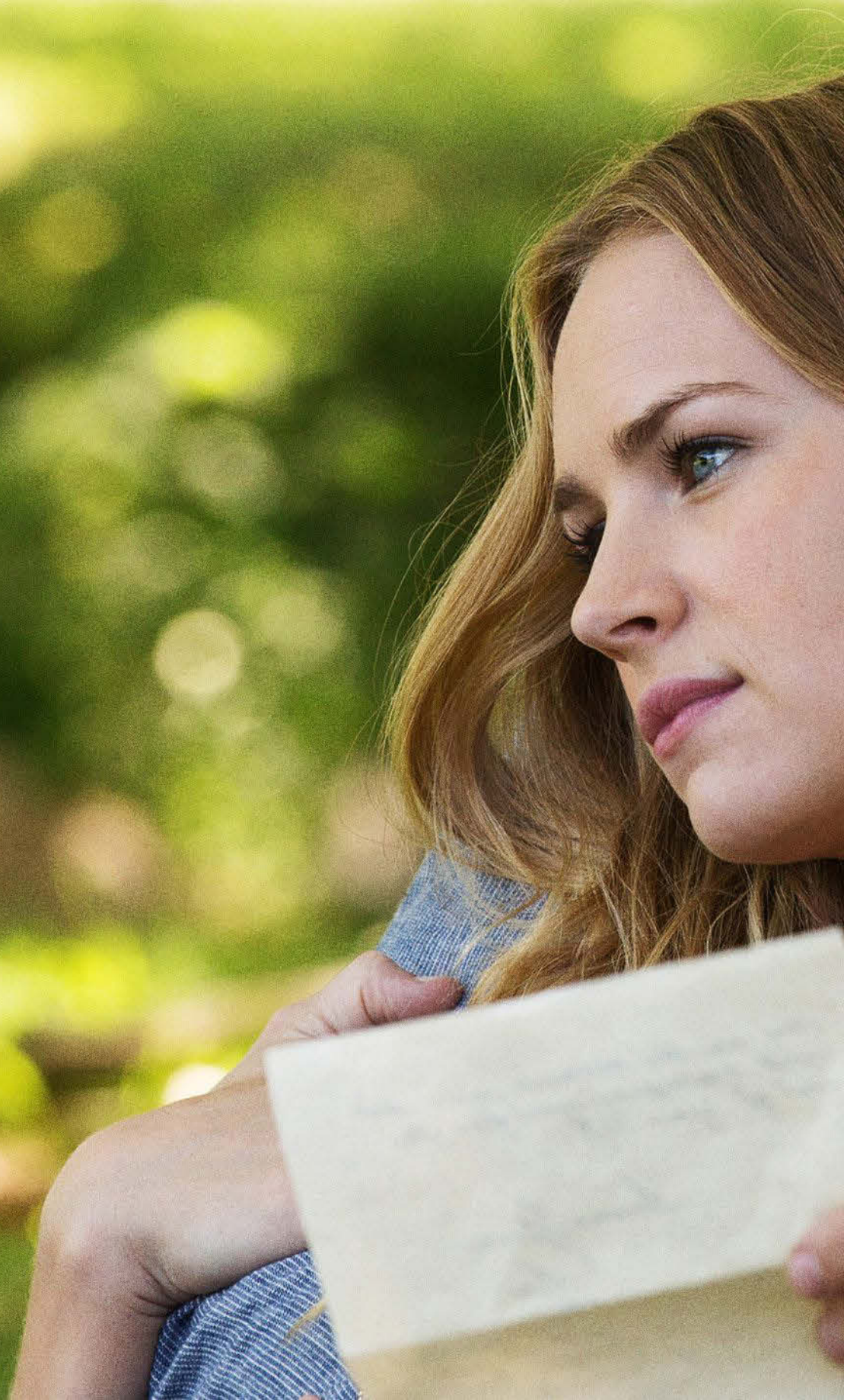
★★★★★
339 Ratings

THE LONGEST RIDE

Rotten Tomatoes
 30%



Q&A with Scott Eastwood and Britt Robertson





iTunes

Review



Music

OWL CITY MOBILE ORCHESTRA



iTunes Preview



Genre: Electronic
Released: Jul 10, 2015
10 Songs
Price: \$9.99

★★★★★
669 Ratings



Verge ft. Aloe Blacc

Mobile Orchestra

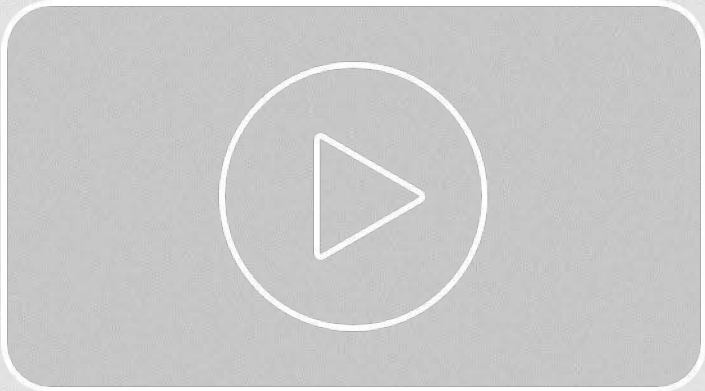
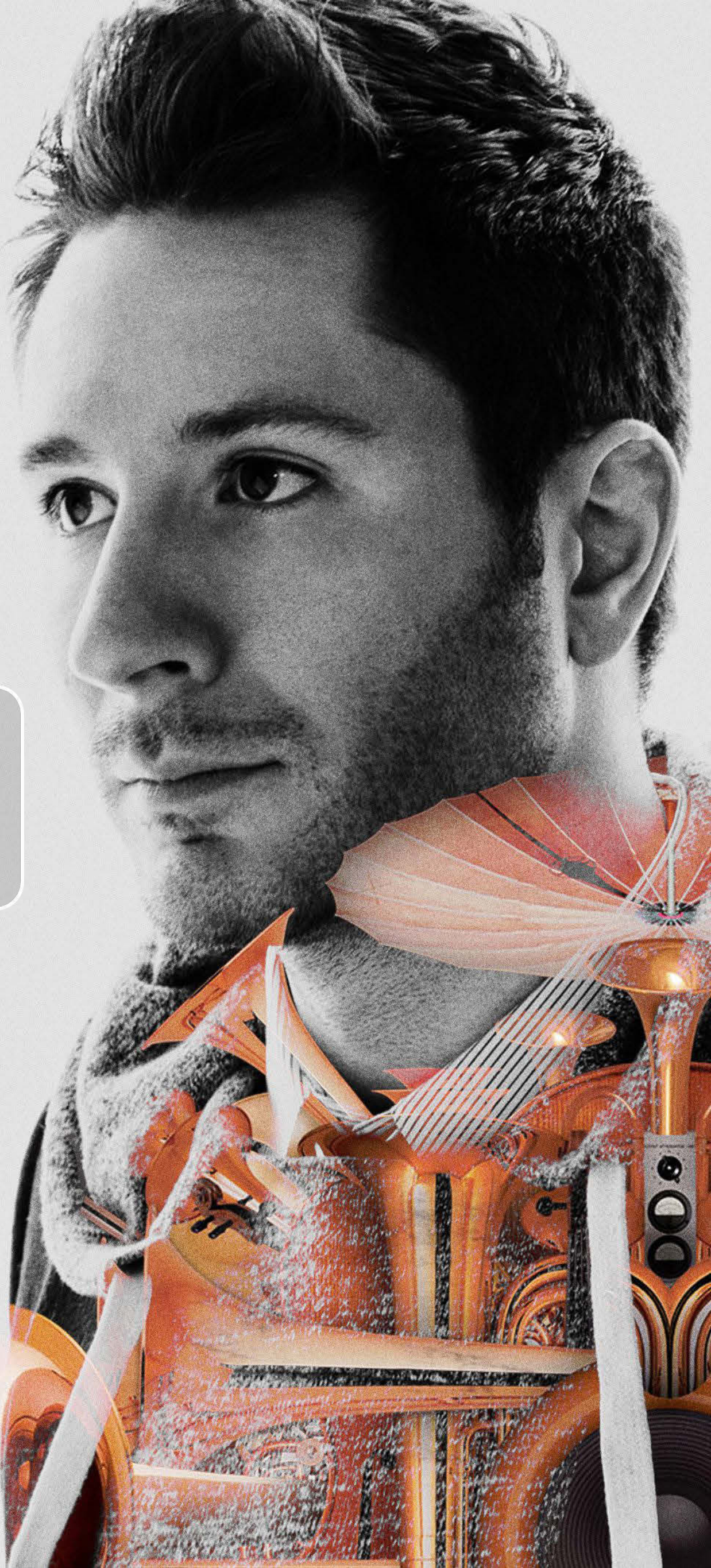
Owl City

This is the fifth studio album of Owl City, the electronica project set up in 2007 by Adam Young, a man of many musical talents. A lead single, "Verge", made its debut on ESPN's Draft Academy in May, and now Owl City fans can hear much more. They can look forward to hearing a release that has been favorably received by critics.

FIVE FACTS:

1. Following "Verge" on May 14, the two other promotional singles so far released from Mobile Orchestra are "My Everything" on June 5 and "Unbelievable" on June 26.
2. Young originally announced his intention to release an Owl City album in 2015 by **releasing a new promotional song, "2015", in which he sang the news.**
3. Scott Fryberger, writing for Jesus Freak Hideout, has described the album as "solid pop" and "**a big, fat, shiny diamond**".
4. The most commercially successful of all of Owl City's songs so far has been "Fireflies", which **reached the top of the Billboard Hot 100 in 2009.**
5. Young's other projects under which music has been released include Port Blue, Sky Sailing and Swimming With Dolphins.

See more in
iTunes



My Everything



Sometime Last Night

R5

R5 is an American pop rock band consisting of Lynch siblings Riker, Rocky, Ross and Rydel, plus family friend Ellington Ratliff. Released on July 10, Sometime Last Night is the band's second studio album. The band will be performing on various dates in the US to promote the album - but, until they play near you, enjoy the new album's songs including "Smile" and "All Night".

FIVE FACTS:

1. Three singles have been released from the album, starting with "Smile" on November 14, 2014.
2. Sometime Last Night arrives almost two years after R5's debut studio album, Louder, which was released in September 2013 and included the singles "Loud" and "Pass Me By".
3. Sometime Last Night was preceded by R5's release of the EP Heart Made Up on You about a year earlier.
4. Nonetheless, none of the songs on that EP actually appear on Sometime Last Night - as, during that album's production, the band decided that they wanted a "**blank slate**".
5. The only promotional single from the album, "**F.E.E.L. G.O.O.D.**", was released on June 30 through iTunes.



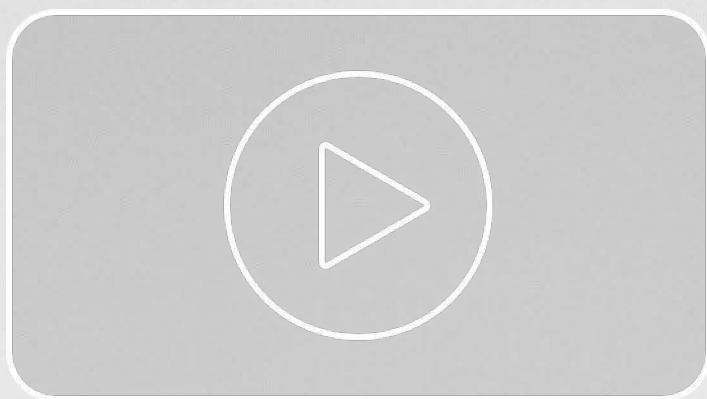
iTunes Preview



Genre: Pop/Rock
Released: Jul 10, 2015
13 Songs
Price: \$9.99

★★★★★
1156 Ratings





Smile







R5 Talk Sometime Last Night

SCIENCE





PLUTO
CLOSE-UP:
SPACECRAFT
MAKES FLYBY
OF ICY,
MYSTERY





We've made it to Pluto by NASA's calculations, the last stop on a planetary tour of the solar system a half-century in the making.

The moment of closest approach for the New Horizons spacecraft came around 7:49 a.m. EDT Tuesday, culminating an epic journey from planet Earth that spanned more than 3 billion miles and 9 1/2 years.

"This is truly a hallmark in human history," said John Grunsfeld, NASA's science mission chief. "It's been an incredible voyage."

Based on everything NASA knows, New Horizons was pretty much straight on course for the historic encounter, sweeping within 7,700 miles of Pluto at 31,000 mph. It actually happened 72 seconds earlier and about 40 miles closer than anticipated.

But official confirmation of the flyby wasn't due until Tuesday night, 13 nerve-racking hours later. That's because NASA wants New Horizons taking pictures of Pluto, its jumbo moon Charon and its four little moons during this critical time, not gabbing to Earth.

In a cosmic coincidence, the encounter occurred 50 years after Mariner 4's flyby of Mars that yielded the first close-up pictures of the red planet.

"I think it's fitting that on the 50th anniversary we complete the initial reconnaissance of the planets with the exploration of Pluto," said principal scientist Alan Stern.

The United States is now the only nation to visit every single planet in the solar system. Pluto was No. 9 in the lineup when New Horizons departed Cape Canaveral, Florida, on Jan. 19, 2006, but was demoted seven months later to dwarf status. Scientists in charge of the \$720 million mission, as well as NASA brass, hope the new observations will restore Pluto's honor.

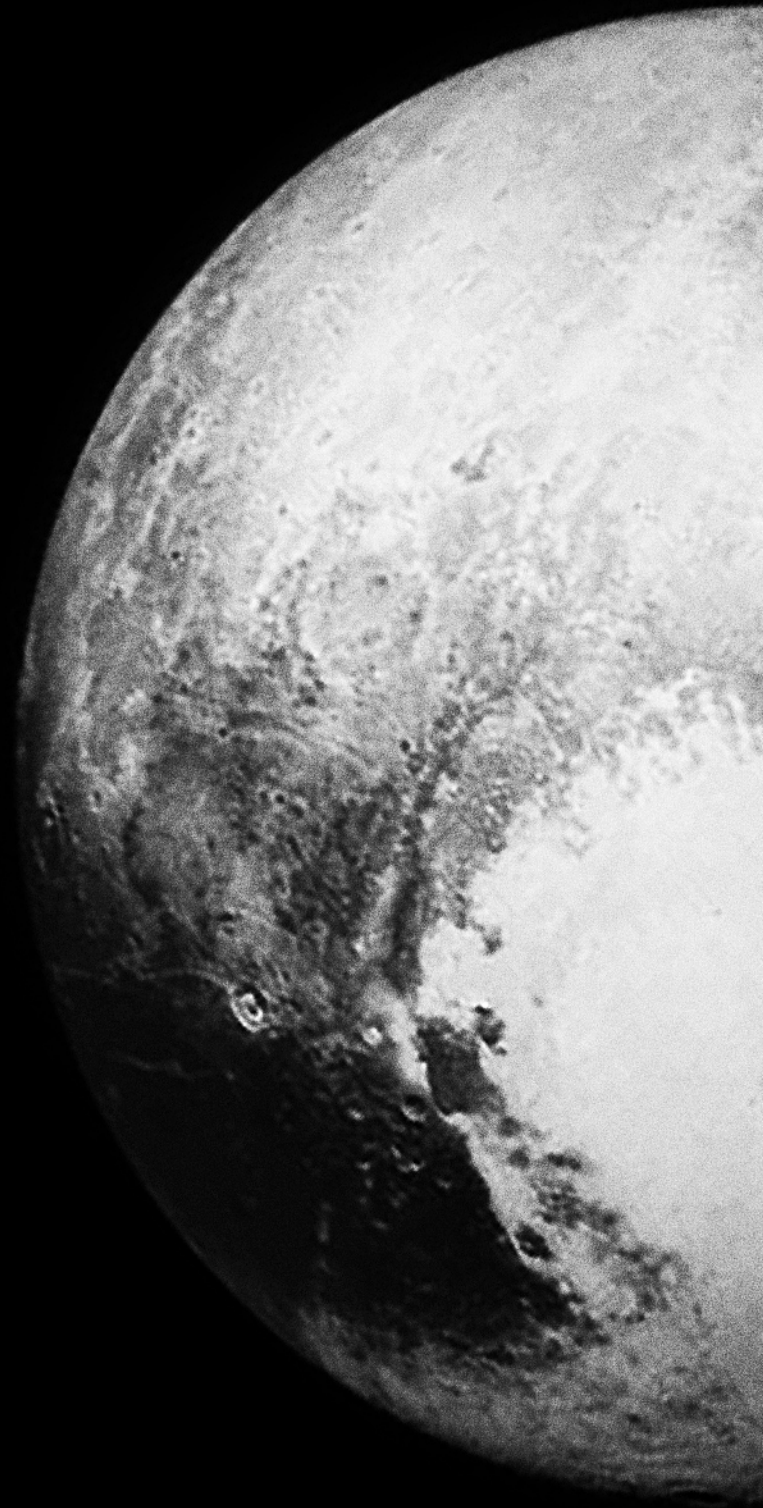
“It’s a huge morning, a huge day not just for NASA but for the United States,” NASA Administrator Charles Bolden said from NASA headquarters in Washington.

NASA marked the moment live on TV, broadcasting from flight operations at Johns Hopkins University’s Applied Physics Laboratory, the spacecraft’s developer and manager.

Inside “countdown central” in Laurel, Maryland, hundreds jammed together to share in the final minutes, including the two children of the late American astronomer who discovered Pluto in 1930, Clyde Tombaugh. The actual flight control room was empty save for a worker sweeping up; the spacecraft was preprogrammed for the flyby and there was nothing anyone could do at that point but join in the celebration.

The crowd waved U.S. flags and counted down the seconds, screaming, cheering and applauding. Chants of “USA!” broke out.

At a news conference afterward, Grunsfeld, Stern and mission operations manager Alice Bowman unveiled a picture of Pluto taken just Monday. The icy, impacted world - a fusion of peach and brassy colors with bright spots at points northward, including the now-famous heart, and darker areas around the equator - drew oohs and aahs.





Even better pictures will start “raining” down to the ground beginning Wednesday, Stern said, “a data waterfall.” But the planetary scientist at Southwest Research Institute in Boulder, Colorado, cautioned everyone to “stay tuned” until New Horizons phones home Tuesday night. Only then will anyone know whether the spacecraft survived its passage through the Pluto system, five moons included.

“Hopefully it did, and we’re counting on that,” Stern told journalists. “But there’s a little bit of drama because this is true exploration. New Horizons is flying into the unknown.”

It takes 4 1/2 hours for signals to travel one-way between New Horizons and flight controllers, the speed of light. The last time controllers heard from the spacecraft was Monday night, according to plan, and everything looked good.

New Horizons already has beamed back the best-ever images of Pluto and big moon Charon. Pluto also has four little moons, all of which were expected to come under New Horizons’ scrutiny.

Bowman said she has to pinch herself as she reflects on all the mission’s accomplishments.

“To see Pluto be revealed just before our eyes, it’s just fantastic,” she said. She considers New Horizons like her own child and is simultaneously “nervous and proud” as she waits to hear back from it.

NASA's planetary science director, Jim Green, also is "on pins and needles." During its approach to Pluto, New Horizons scouted for any dangerous debris out there that could wipe out the mission.

"They're confident the way is clear, but you know, he said, throwing up his hands, "we're moving into the unknown. You never can tell."

The odds of a devastating blow, at this late point, are said to be an extremely low one or two in 10,000.

Pictures from the actual flyby, won't be transmitted until well afterward so the seven science instruments can take full advantage of the encounter. In fact, it will take more than a year to get back all the data - 16 full months, or until October or November 2016.

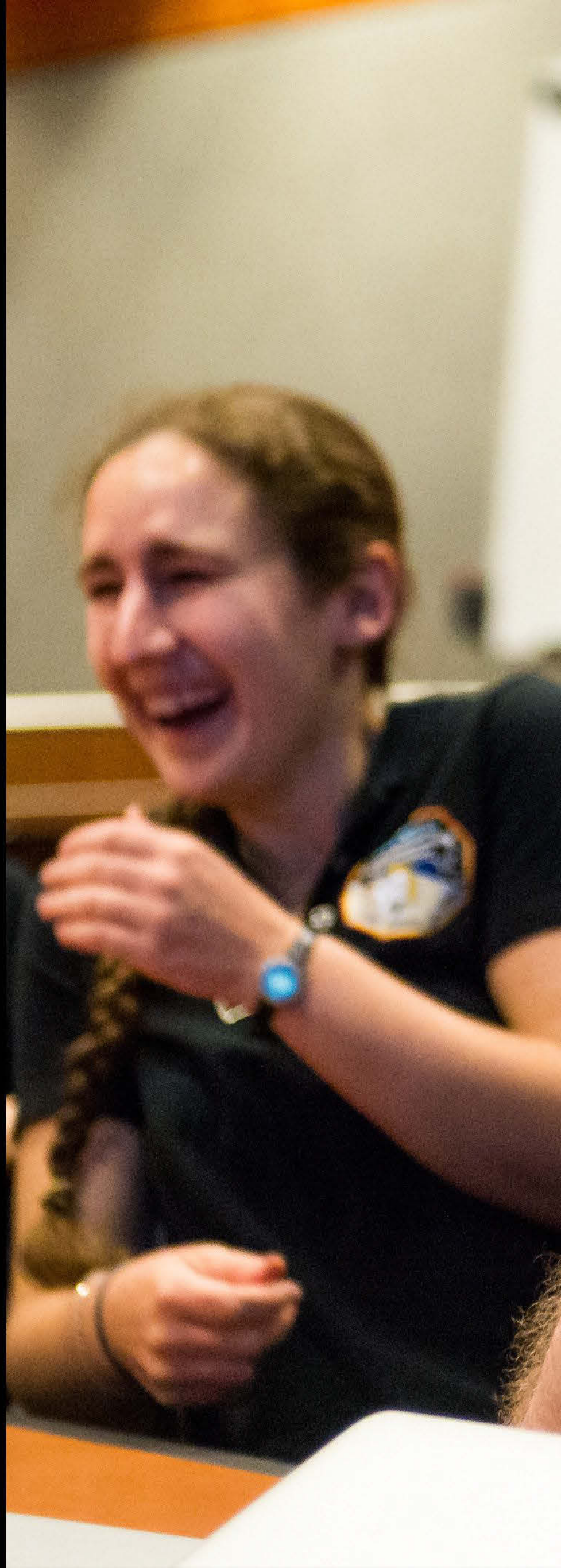
On the eve of the flyby, NASA announced that Pluto is actually bigger than anyone imagined, thanks to measurements made by the spacecraft, a baby grand piano-size affair. It's about 50 miles bigger, for a grand total of 1,473 miles in diameter. But that's still puny by solar-system standards: Pluto is just two-thirds the size of Earth's moon.

Thanks to New Horizons, Pluto is now confirmed to be the largest object in the so-called Kuiper Belt, considered the third zone of the solar system after the inner rocky planets and outer gaseous ones. This unknown territory is a shooting gallery of comets and other small bodies.

If a mission extension is granted, New Horizons will seek out another Kuiper Belt object before heading out of the solar system - for good.

Continued success and interest, meanwhile, could lead to a Pluto-orbiting mission, Green said.

"These are the events that catch our imaginations and remind us why we must continue investing in planetary science and NASA's mission of space exploration," Rep. Lamar Smith, R-Texas, chairman of the House Science, Space and Technology Committee, said in a statement.





SPOTLIGHT SHINING ON PLUTO ON COLD OUTSKIRTS OF SOLAR SYSTEM

CAPE CANAVERAL, Fla. (AP) -- The spotlight is bright enough to thaw even Pluto.

Well, not quite, but the tiny, icy world is getting front-page, prime-time attention for its first visit by a spacecraft - NASA's New Horizons.

Tuesday morning's 31,000-mph flyby - with closest approach at 7,700 miles, the approximate distance between Seattle and Sydney, or New York and Mumbai - is expected to open up new ground on the last unexplored planetary territory of our solar system.

"Turning little dots, little points of light into planets," is what New Horizons, on the road for 9 1/2 years and 3 billion miles, is all about, principal scientist Alan Stern said Monday.

Here's a rundown on Pluto, a 20th-century discovery about to become the 21st-century darling of astronomers:

DISCOVERY

Pluto is the only planet (OK, now former planet) in our solar system discovered by an American. Astronomer Clyde Tombaugh spotted the dot in 1930 from Lowell Observatory in Flagstaff, Arizona. The name Pluto came from a British schoolgirl, Venetia Burney, then 11, based on the mythological god of the underworld.

Tombaugh died at age 90 in 1997, nine years before New Horizons took flight. A smidgen of his ashes is on board. Burney died in 2009, also at age 90. A student-built dust counter aboard New Horizons - from the University of Colorado at Boulder - is named after her.

Both of Tombaugh's two children, now in their 70s, were at the New Horizons mission operations center in Maryland for Tuesday's celebration.





FIVE MOONS

Big moon Charon was discovered in 1978 by Americans using the U.S. Naval Observatory in Flagstaff, followed by little moons Nix and Hydra in 2005, Kerberos in 2011 and Styx in 2012.

The Hubble Space Telescope revealed all four baby moons. Astronomers stuck to underworld undertones when it came to the names.

New Horizons will hunt for more moons, but at this point, they would have to be pretty elusive - scientists guess probably less than a mile across. The Pluto empire, complete with six bodies, at least for now, is like its own mini solar system.





FORGET THE SUNGLASSES

Pluto is so far from the sun - between 2.8 billion and 4.6 billion miles - that twilight reigns. At high noon on Pluto, it looks as though it would be dawn or dusk on Earth. And let's not forget the frigid weather, given its distance from the sun. Temperatures can plunge to minus-400 degrees.

Pluto's orbit is extremely oblong, plus it's tilted. It takes 248 years for Pluto to orbit the sun. Thus, it's only made it about one-third of the way around the sun since its discovery in 1930. Every so often, Neptune's orbit exceeds Pluto's, putting Neptune slightly farther out.



FIRST A PLANET, THEN IT'S NOT

Pluto is the only planet to get kicked out of the solar system club.

Just seven months after New Horizons rocketed away from Cape Canaveral, Florida, in 2006, the International Astronomical Union declassified Pluto as the ninth planet for technical reasons. Instead, it became a dwarf planet. The decision left the solar system with eight full-fledged planets, with Mercury replacing Pluto as the smallest.

The latest measurements made by New Horizons put Pluto a little bigger than anyone imagined: 1,473 miles in diameter.

New Horizons scientists, as well as NASA's leaders, are hoping the new pictures will restore Pluto's planet status.

THE TWILIGHT ZONE

Pluto is the biggest object in the icy Kuiper Belt, also known as the third zone after the inner rocky planets and outer gaseous giants. It's also called the Twilight Zone because of its great distance from the sun.

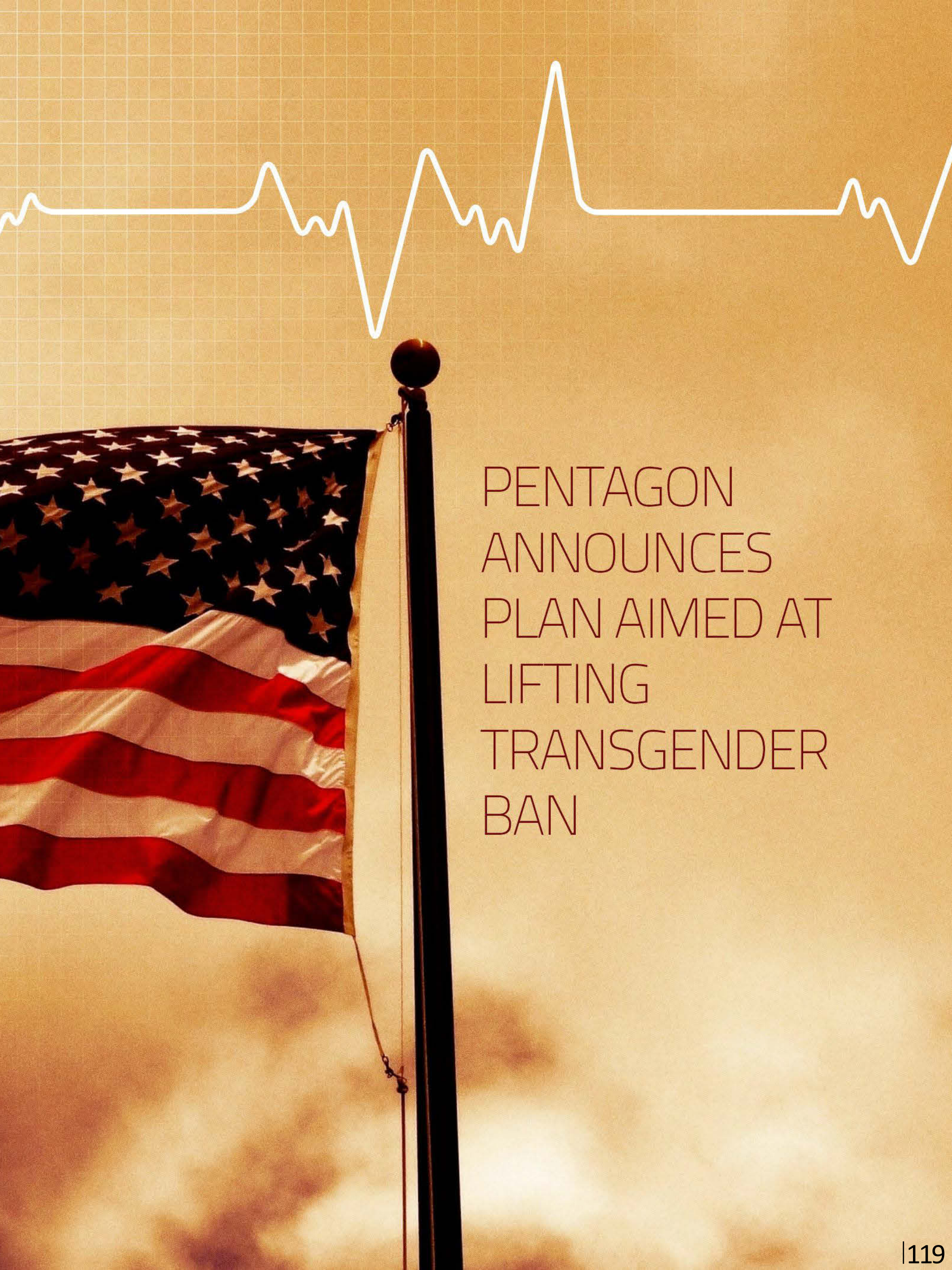
The Kuiper Belt (pronounced KIE-per) is full of comets and other small frosty objects. It's named after the late Dutch-American astronomer Gerard Kuiper, who proposed a bevy of small bodies beyond Neptune back in the 1950s. The New Horizons team hopes to go after a smaller Kuiper Belt object following the Pluto flyby, provided a mission extension is approved.

Online:

NASA: <https://www.nasa.gov/mission-pages/newhorizons>

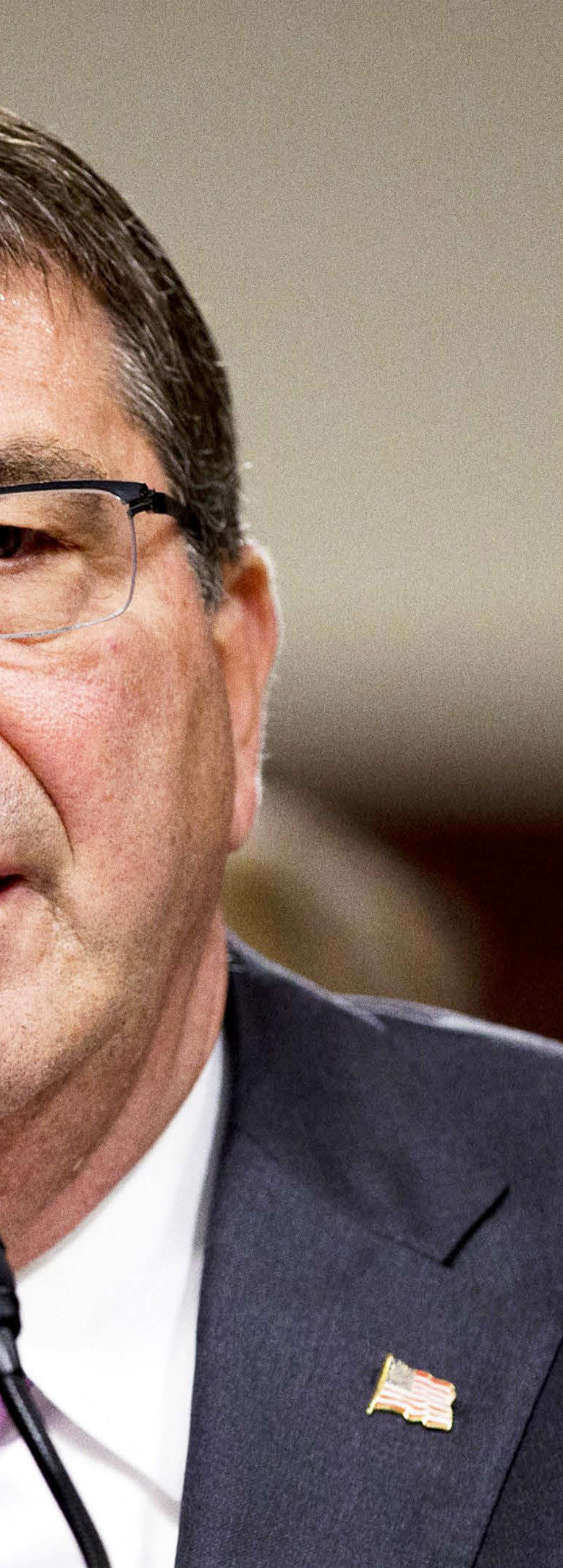
Johns Hopkins University: <http://pluto.jhuapl.edu/>





PENTAGON
ANNOUNCES
PLAN AIMED AT
LIFTING
TRANSGENDER
BAN






The Pentagon's current regulations banning transgender individuals from serving in the military are outdated, Defense Secretary Ash Carter said Monday, ordering a six-month study aimed at formally ending one of the last gender- or sexuality-based barriers to military service.

Carter said he is creating a working group that will review the policies and determine if lifting the ban would have any impact on the military's ability to be ready for battle. But he said the group will begin with the presumption that transgender people should be able to serve openly "without adverse impact on military effectiveness and readiness, unless and except where objective, practical impediments are identified." The plan, which was first reported by The Associated Press, gives the services time to methodically work through the legal, medical and administrative issues and develop training to ease any transition, and senior leaders believed six months would be sufficient.

"The Defense Department's current regulations regarding transgender service members are outdated and are causing uncertainty that distracts commanders from our core missions," Carter said in a statement released Monday. "At a time when our troops have learned from experience that the most important qualification for service members should be whether they're able and willing to do their job, our officers and enlisted personnel are faced with certain rules that tell them the opposite."

Carter asked his personnel undersecretary, Brad Carson, to lead the working group of senior military and civilian leaders to take an objective look at the issue, including the costs, and determine whether it would create any insurmountable problems that could derail the plan. The group would also develop uniform guidelines. During the six months, transgender individuals would still not be able to join the military, but any decisions to force out those already serving would be referred to Carson.





One senior official said the goal was to avoid forcing any transgender service members to leave during that time. That official was not authorized to discuss the matter publicly and spoke on condition of anonymity.

Some of the key concerns involved in the repeal of the ban include whether the military would conduct or pay for the medical costs of surgeries and other treatment associated with any gender transition, as well as which physical training or testing standards transgender individuals would be required to meet during different stages of their transition.

Officials said the military also wants time to tackle questions about where transgender troops would be housed, what uniforms they would wear, what berthing they would have on ships, which bathrooms they would use and whether their presence would affect the ability of small units to work well together. The military has dealt with many similar questions as it integrated the ranks by race, gender and sexual orientation.

Transgender people - those who identify with a different gender than they were born with and sometimes take hormone treatments or have surgery to develop the physical characteristics of their preferred gender - are banned from military service. But studies and other surveys have estimated that as many as 15,000 transgender people serve in the active-duty military and the reserves, often in secret but in many cases with the knowledge of their unit commander or peers.

“Obviously this isn’t finished, but Secretary Carter’s clear statement of intent means that transgender service members should and will be treated with the same dignity as other service members,” said Allyson Robinson, Army veteran and policy director for an association of lesbian, gay, bisexual and transgender military personnel called Service Members, Partners and Allies for Respect and Tolerance for All, or SPARTA.





Brynn Tannehill, who was a Navy pilot before leaving the force and transitioning to a woman, recalled the difficulties when serving.

“It was stressful and it was something that I couldn’t talk with anyone about, because if you even breathed a word of it you didn’t know what was going to happen,” said Tannehill, who still serves in Individual Ready Reserve. “You could lose your career, that I’d worked so hard for.”

Several Congress members, including Rep. Adam Smith, ranking Democrat on the House Armed Services Committee, expressed support for Carter’s decision. But the more conservative Family Research Center questioned the change.

“Considering the abysmal condition of our military and a decline in readiness, why is this a top priority for the Obama administration?” said retired Lt. Gen. Jerry Boykin, the council’s executive vice president. “The Pentagon must answer whether this proposed policy makes our military more capable of performing its mission. The answer is a very clear and resounding no.”

The move follows several weeks of high-level meetings in the Pentagon among military chiefs, secretaries and Defense Department leaders, including one Monday involving Carter and the chiefs of the various services.

Military leaders have pointed to the gradual - and ultimately successful - transition after the ban on gays serving openly in the military was lifted in 2011. Although legislation repealing that ban passed Congress in late 2010, the military services spent months conducting training and reviews before the decision actually took effect the following September.

The latest Pentagon move comes just weeks after the Supreme Court upheld the right of same-sex couples to marry.

Officials familiar with the Pentagon meetings said the chiefs of the Army, Navy, Marine Corps and Air Force did not express opposition to

lifting the ban. Instead, they said the military leaders asked for time to figure out health care, housing and other questions and also to provide information and training to the troops to ensure a smooth transition. Although guidelines require that transgender individuals be dismissed from the military, the services in recent months have required more senior leaders to make the final decisions on those cases, effectively slowing the dismissal process. The transgender issue came to the fore as the military struggled with how to deal with convicted national security leaker Chelsea Manning's request for hormone therapy and other treatment while she's in prison. Manning, arrested as Bradley Manning, is the first transgender military prisoner to request such treatment, and the Army approved the hormone therapy, under pressure from a lawsuit.





TOP 10 SONGS

CHEERLEADER
(FELIX JAEHN REMIX RADIO EDIT)
OMI

CAN'T FEEL MY FACE
THE WEEKND

FIGHT SONG
RACHEL PLATTEN

WATCH ME (WHIP / NAE NAE)
SILENTO

HONEY, I'M GOOD.
ANDY GRAMMER

SHUT UP AND DANCE
WALK THE MOO

GOOD FOR YOU (FEAT. A\$AP ROCKY)
SELENA GOMEZ

WORTH IT (FEAT. KID INK)
FIFTH HARMONY

LEAN ON (FEAT. MØ & DJ SNAKE)
MAJOR LAZER

BAD BLOOD (FEAT. KENDRICK LAMAR)
TAYLOR SWIFT

BOB MARLEY

and the WAILERS





TOP 10 **ALBUMS**

1989

TAYLOR SWIFT

KIDZ BOP 29

BREAKING BENJAMIN

MONTEVALLO

SAM HUNT

LEGEND (REMASTERED)

BOB MARLEY & THE WAILERS

BLURRYFACE

TWENTY ONE PILOTS

COMING HOME

LEON BRIDGES

X (DELUXE EDITION)

ED SHEERAN

SOMETIME LAST NIGHT

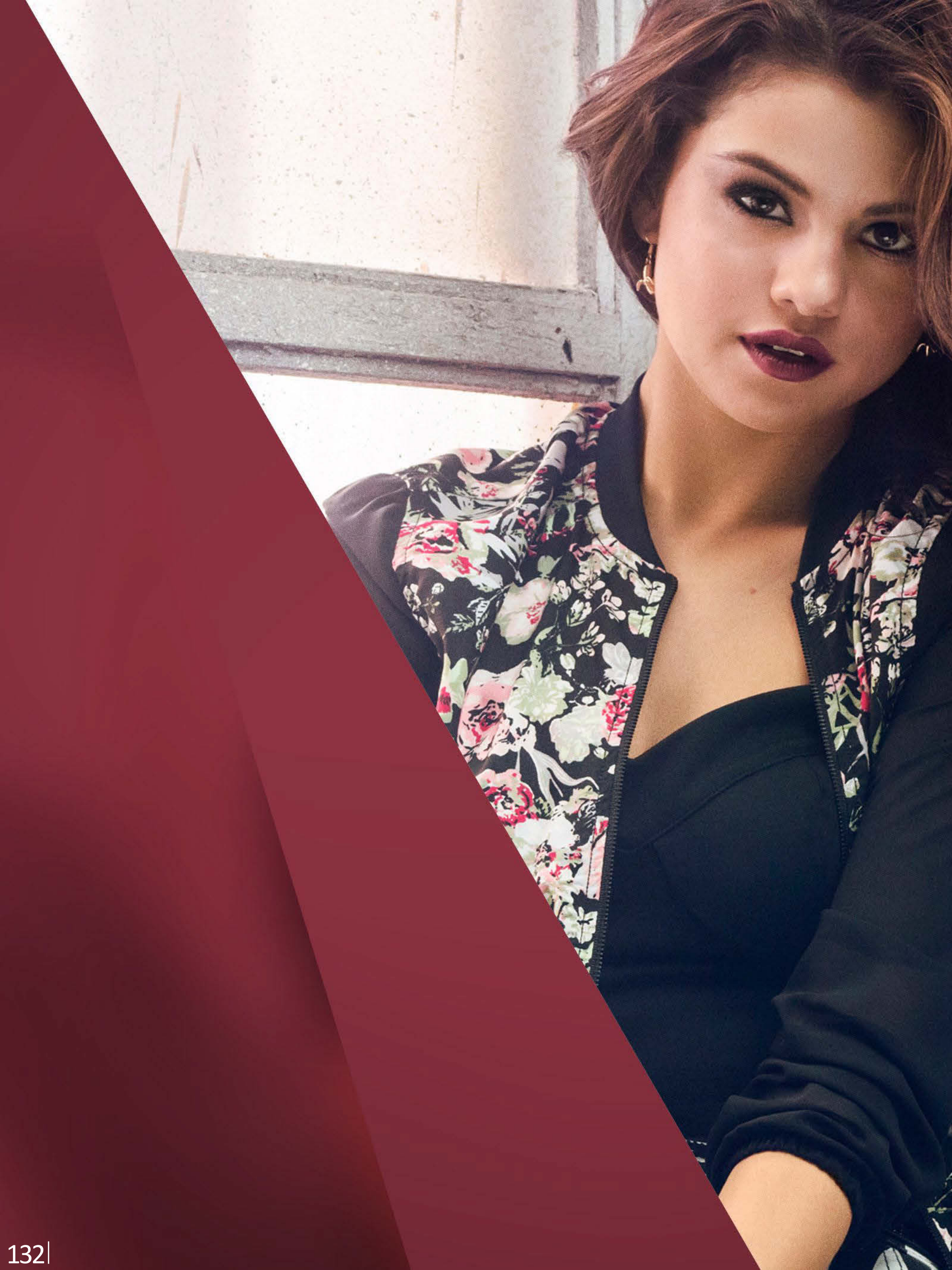
R5

JEKYLL + HYDE

ZAC BROWN BAND

MOBILE ORCHESTRA

OWL CITY





TOP 10

MUSIC VIDEOS

WATCH ME (WHIP / NAE NAE)

SILENTO

BAD BLOOD (FEAT. KENDRICK LAMAR)

TAYLOR SWIFT

GOOD FOR YOU

SELENA GOMEZ

UPTOWN FUNK (FEAT. BRUNO MARS)

MARK RONSON

GIRL CRUSH

LITTLE BIG TOWN

CHEERLEADER (FELIX JAEHN REMIX)

OMI

SHAKE IT OFF

TAYLOR SWIFT

FIGHT SONG

RACHEL PLATTEN

FUN (FEAT. CHRIS BROWN)

PITBULL

**LIKE I'M GONNA LOSE YOU
(FEAT. JOHN LEGEND)**

MEGHAN TRAINOR





TOP

10 TV SHOWS

EPS1.2_D3BUG.MKV

MR. ROBOT, SEASON 1

EPS1.1_ONE-AND-ZEROES.MPEG

MR. ROBOT, SEASON 1

EPISODE 2

HUMANS

GAME ON, CHARLES

PRETTY LITTLE LIARS, SEASON 6

COMPENSATION

SUITS, SEASON 5

THE NEW GOLD RUSH

MILLION DOLLAR LISTING: SAN FRANCISCO, SEASON 1

ARABELLA

JONATHAN STRANGE & MR NORRELL

EPS1.0_HELLOFRIEND.MOV

MR. ROBOT, SEASON 1

THREESOMES

MISTRESSES, SEASON 3 (US SERIES)

A HOUSE BUILT ON SAND

TYRANT, SEASON 2



NDY

A background image of an astronaut in a white spacesuit floating in space, with a bright light source visible in the distance. The image is split diagonally by a dark orange band.

TOP 10 *BOOKS*

W T

GREY

E L JAMES

GO SET A WATCHMAN

HARPER LEE

THE GIRL ON THE TRAIN

PAULA HAWKINS

PAPER TOWNS

JOHN GREEN

TO KILL A MOCKINGBIRD

HARPER LEE

CODE OF CONDUCT

BRAD THOR

THE ENGLISH SPY

DANIEL SILVA

LUCKIEST GIRL ALIVE

JESSICA KNOLL

THE MARTIAN

ANDY WEIR

THE RUMOR

ELIN HILDERBRAND





SILICON VALLEY COMPANY STARTS TO TAKE COURT DISPUTES ONLINE

Imagine working out a divorce without hiring an attorney or stepping into court or disputing the tax assessment on your home completely online.

A Silicon Valley company is starting to make both possibilities a reality with software that experts say represents the next wave of technology in which the law is turned into computer code that can solve legal battles without the need for a judge or attorney.

“We’re not quite at the Google car stage in law, but there are no conceptual or technical barriers to what we’re talking about,” said Oliver Goodenough, director of the Center for Legal Innovation at Vermont Law School, referring to Google’s self-driving car.

The computer programs, at least initially, have the ability to relieve overburdened courts of small claims cases, traffic fines and some family law matters. But Goodenough and other experts envision a future in which even more complicated disputes are resolved online, and they say San Jose, California-based Modria has gone far in developing software to realize that.

“There is a version of the future when computers get so good that we trust them to play this role in our society, and it lets us get justice to more people because it’s cheaper and more transparent,” said Colin Rule, Modria’s co-founder.

Officials in Ohio are using Modria’s software to resolve disputes over tax assessments and keep them out of court, and a New York-based arbitration association has deployed it to settle medical claims arising from certain types of car crashes.

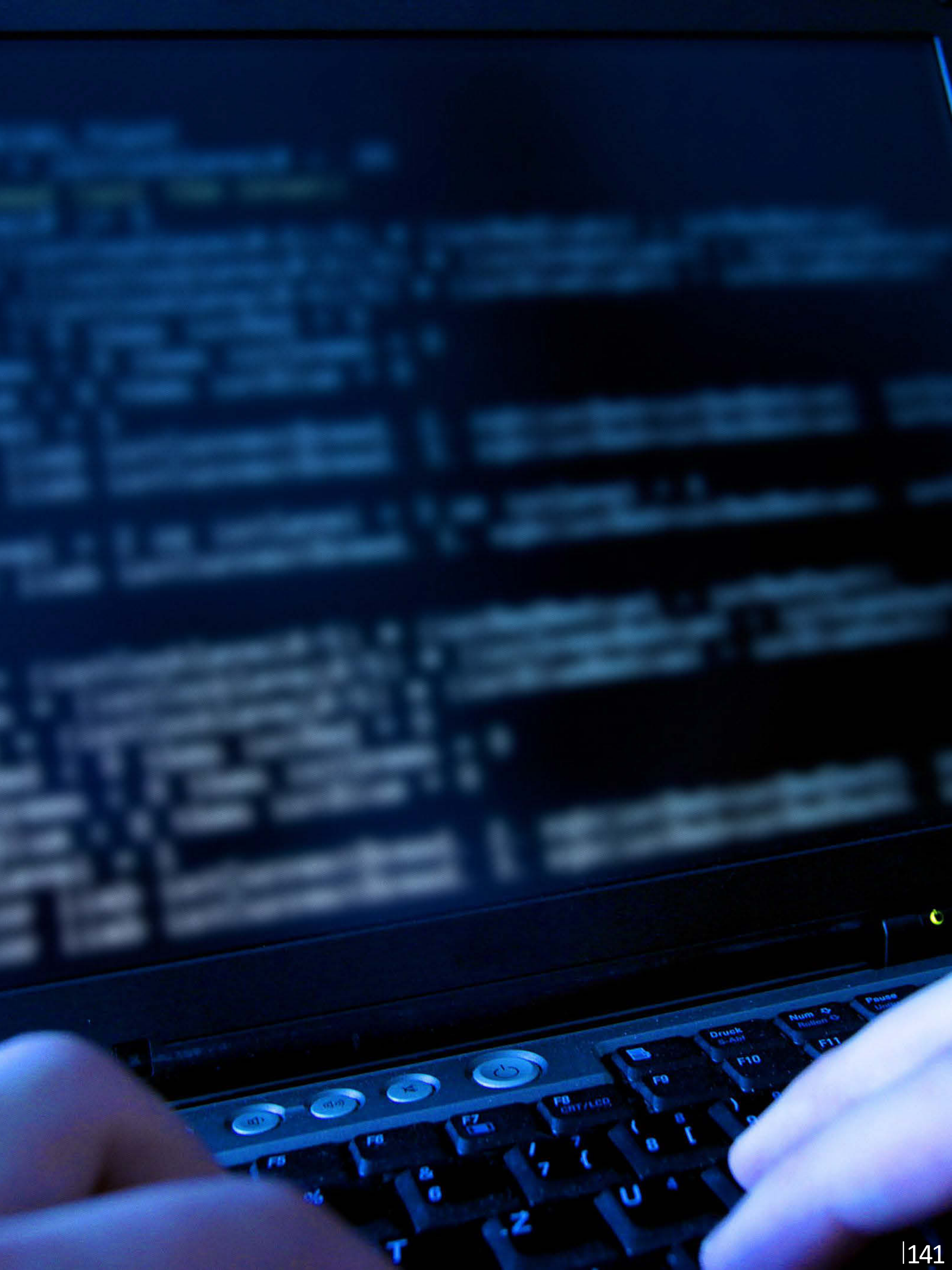
In the Netherlands, Modria software is being used to guide people through their divorces.

The program walks couples through more than two dozen questions, including how they want to co-parent any children they have. It suggests values for spousal support and notes areas of agreement. A second module allows them to negotiate areas of disagreement. If they reach a resolution, they can print up divorce papers that are then reviewed by an attorney to make sure neither side is giving away too much before they are filed in court.

Hundreds of couples have gone through the system since it launched in February, said Larry Friedberg, Modria’s chief marketing officer.

Modria’s founders initially developed their software to help eBay and PayPal solve customer complaints about damaged goods or late deliveries without employing teams of customer service representatives. At eBay, Rule said his system was resolving 60 million disputes a year.





He co-founded Modria in 2011. Although the company's focus is on selling its technology to e-commerce businesses, Rule said he is passionate about deploying it to courts.

"I can build great tools that represent the cutting edge of technology and extend it into the legal sector where none of that expertise resides," he said.

A Michigan company, Court Innovations, is using similar technology to resolve traffic disputes. In four court districts in the state, people ticketed on suspicion of running a red light or speeding can go online and provide an explanation in hopes of getting the ticket thrown out or a lower fine. Prosecutors review the information and make a decision that can be transmitted electronically to the alleged scofflaw for acceptance or rejection, said MJ Cartwright, the company's CEO. The system has had more than 800 users so far, almost all of whom have resolved their cases online, she said.

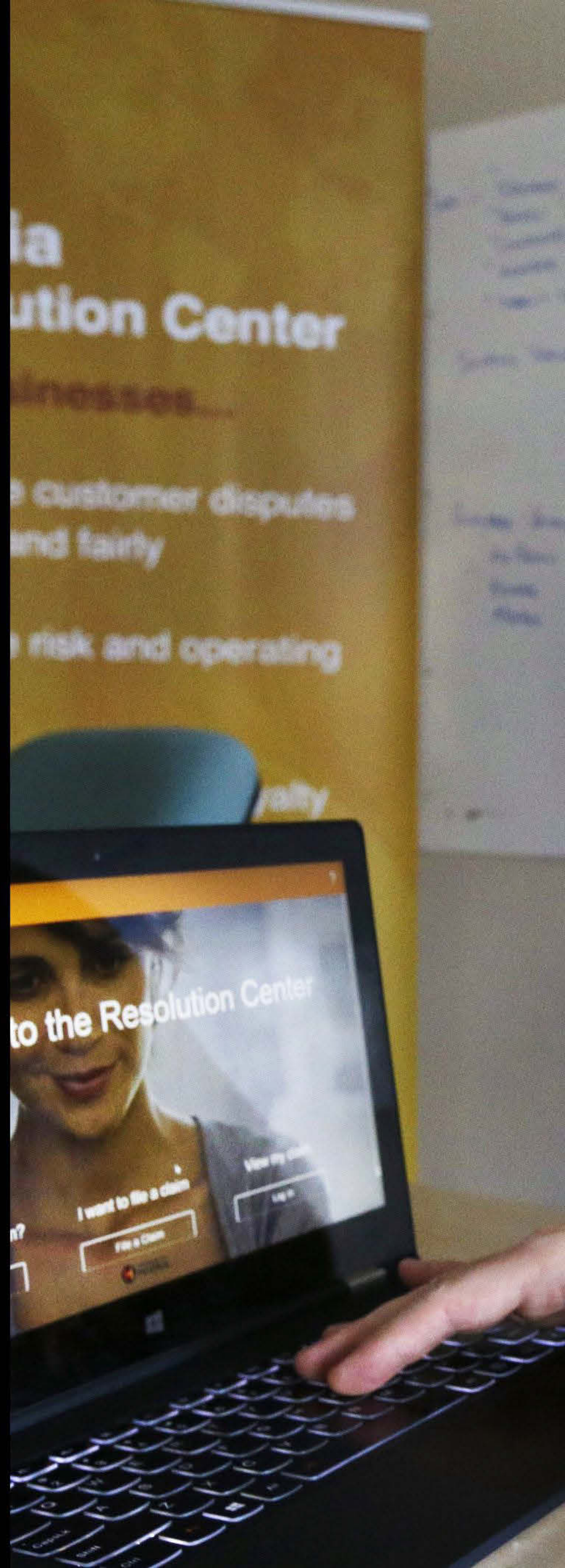
"When you're online, there's a lot you don't know about that person such as their race and other things that can cloud the decision-making process," she said.

Technology such as Modria's can provide legal support to people and businesses that have written off lawyers and the court system as too expensive and tedious and would otherwise try to resolve their disputes on their own, said Larry Bridgesmith, a law professor at Vanderbilt Law School in Tennessee who focuses on dispute resolution strategies.

The American Bar Association recommended Bridgesmith as an expert on the subject.

The technology won't do away with attorneys, but it will require them to adapt, he said.

"If lawyers begin to understand that those are tools they can use to lower the costs of entry into the legal system ... they can get back in the business of serving clients who are presently not served," he said.





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